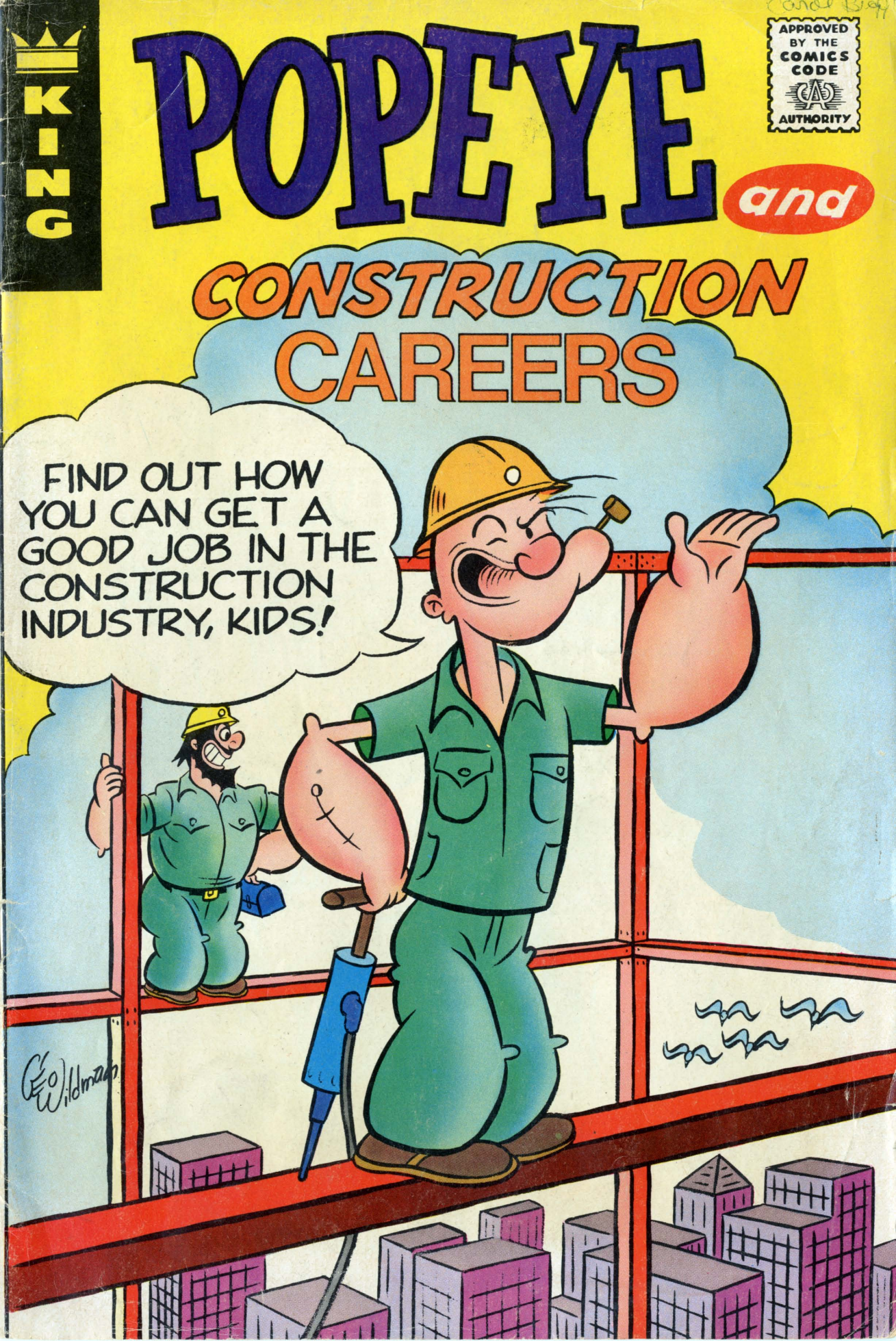
KING

POPEYE and CONSTRUCTION CAREERS

APPROVED BY THE COMICS CODE AUTHORITY



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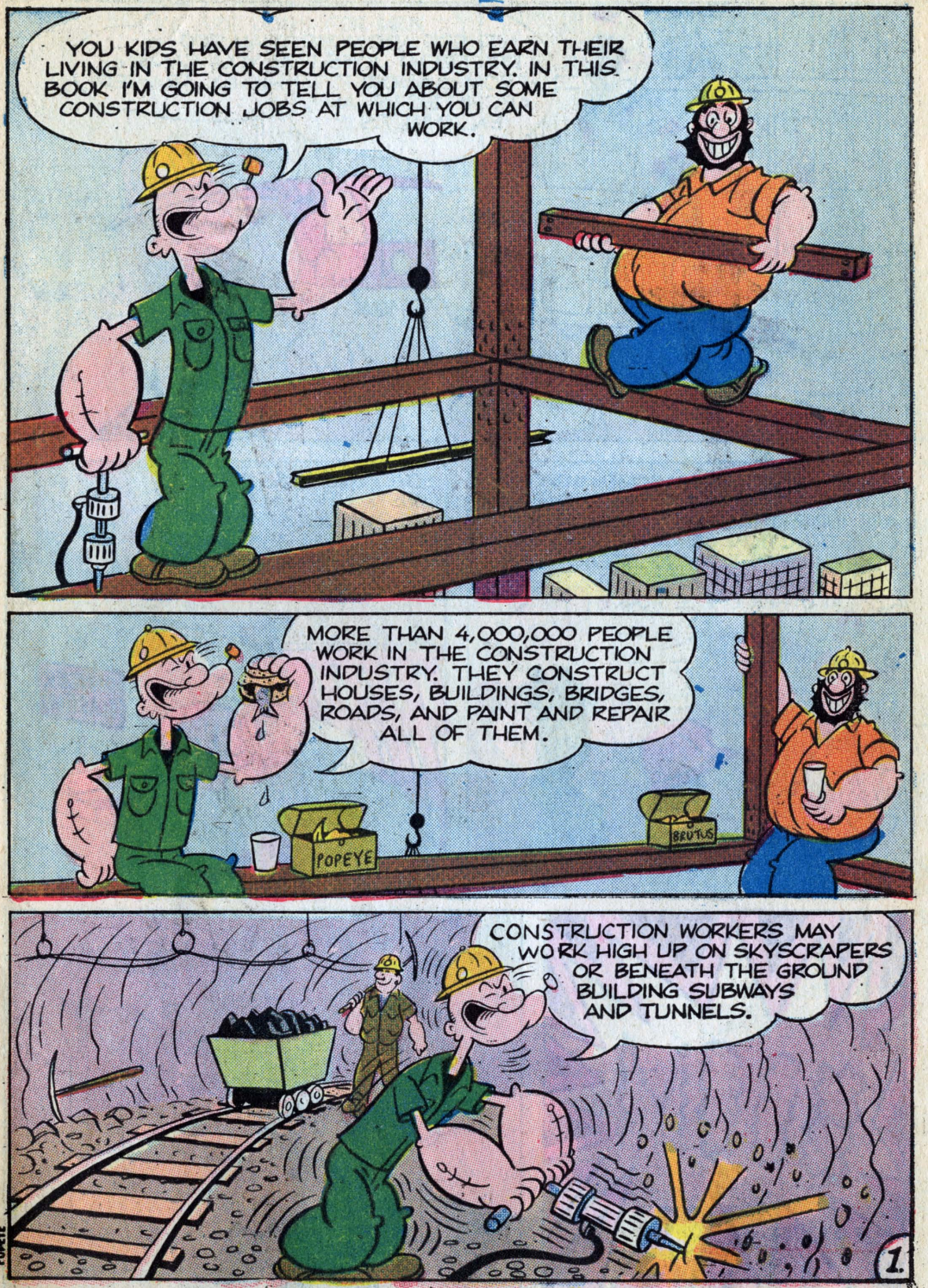
YOU KIDS HAVE SEEN PEOPLE WHO EARN THEIR LIVING IN THE CONSTRUCTION INDUSTRY. IN THIS BOOK I'M GOING TO TELL YOU ABOUT SOME CONSTRUCTION JOBS AT WHICH YOU CAN WORK.
MORE THAN 4,000,000 PEOPLE WORK IN THE CONSTRUCTION INDUSTRY. THEY CONSTRUCT HOUSES, BUILDINGS, BRIDGES, ROADS, AND PAINT AND REPAIR ALL OF THEM.
POPEYE
BRUTUS
CONSTRUCTION WORKERS MAY WORK HIGH UP ON SKYSCRAPERS OR BENEATH THE GROUND BUILDING SUBWAYS AND TUNNELS.
1.

POPEYE E-5
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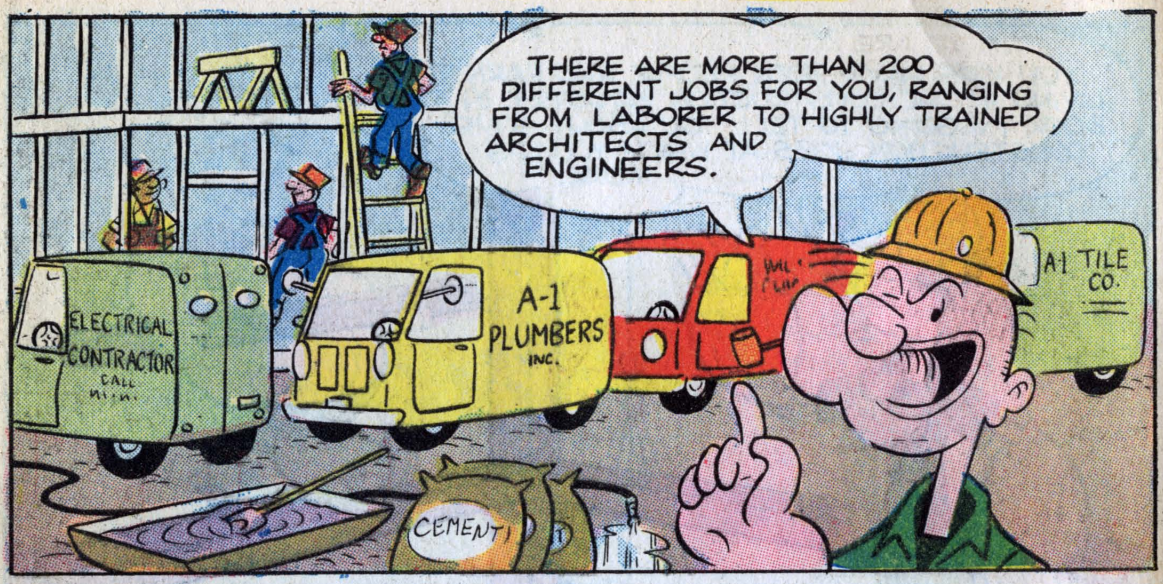
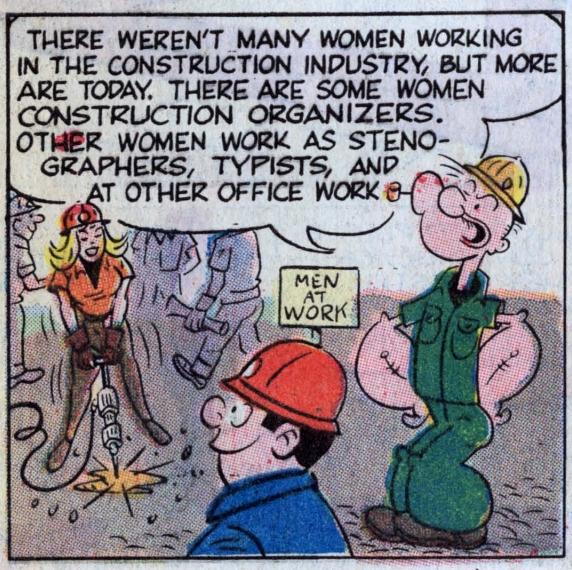
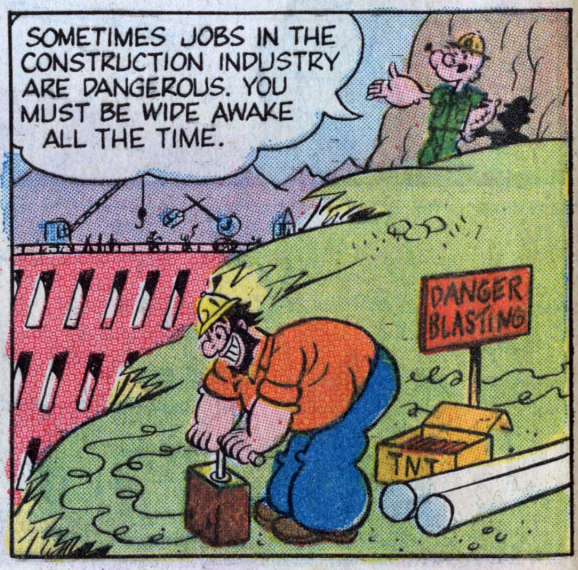
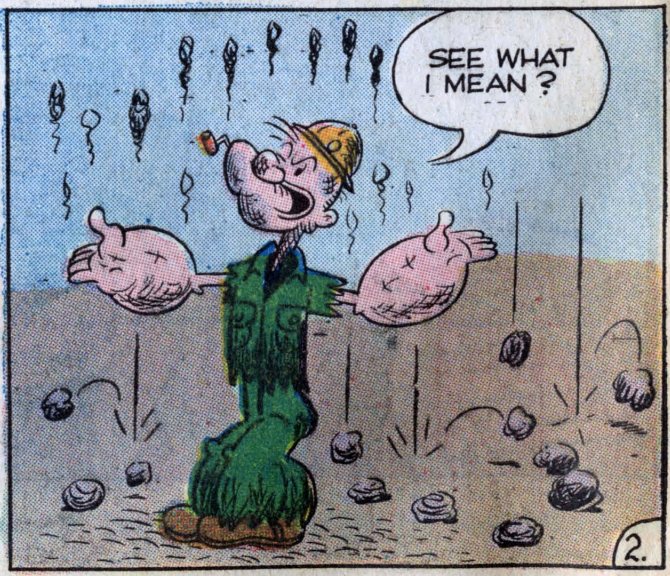
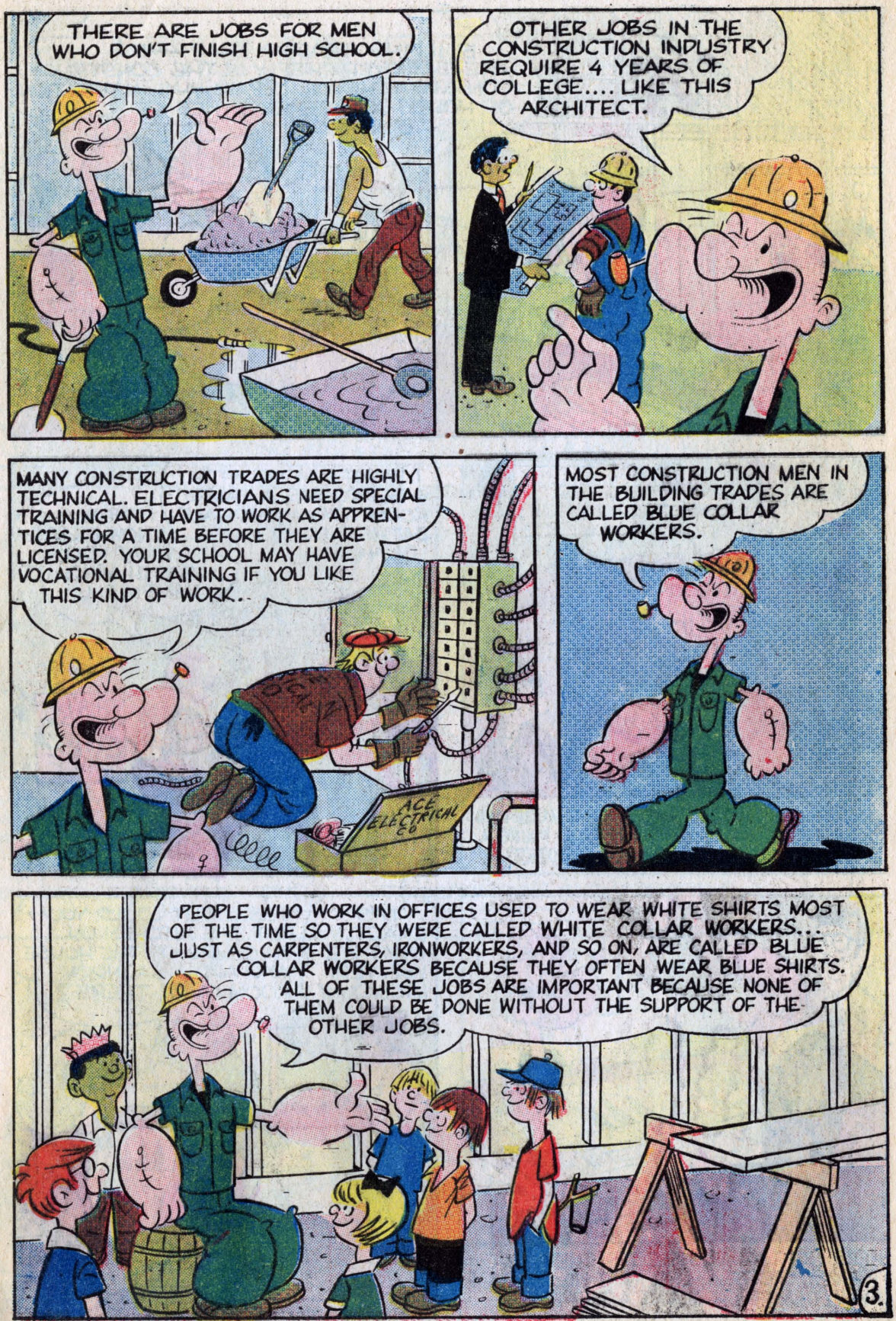

THERE ARE MORE THAN 200 DIFFERENT JOBS FOR YOU, RANGING FROM LABORER TO HIGHLY TRAINED ARCHITECTS AND ENGINEERS.
ELECTRICAL CONTRACTOR
A-1 PLUMBERS INC.
A-1 TILE CO.
CEMENT

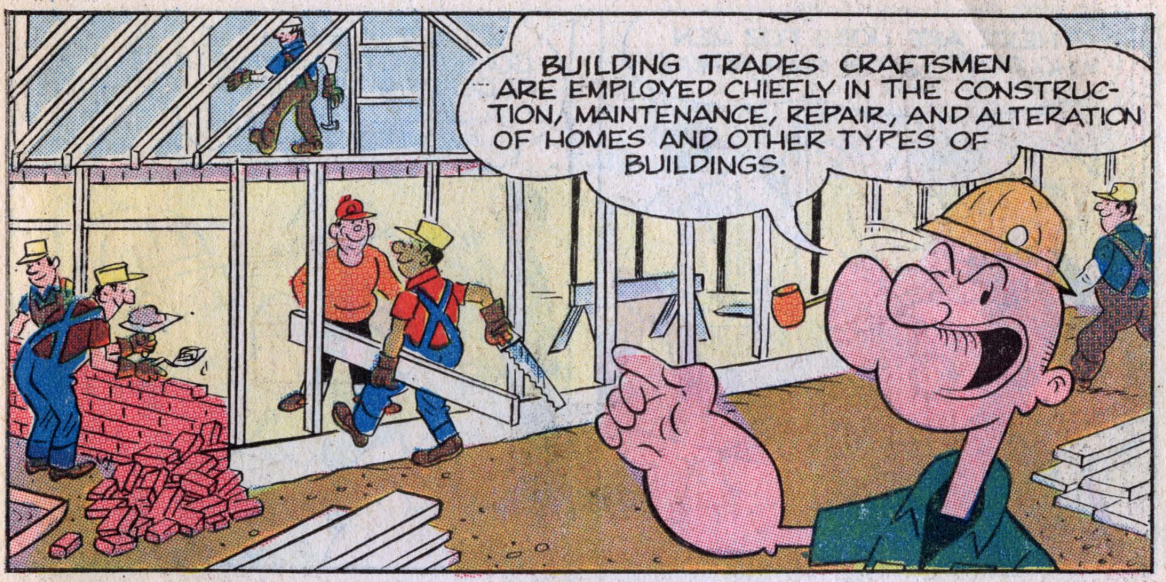

THERE WEREN'T MANY WOMEN WORKING IN THE CONSTRUCTION INDUSTRY, BUT MORE ARE TODAY. THERE ARE SOME WOMEN CONSTRUCTION ORGANIZERS. OTHER WOMEN WORK AS STENOGRAPHERS, TYPISTS, AND AT OTHER OFFICE WORK
MEN AT WORK

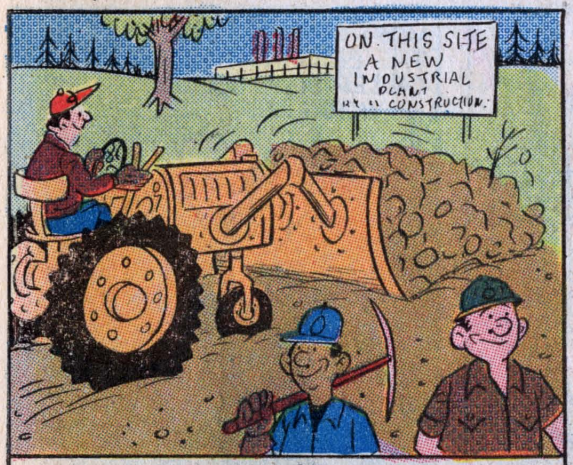

SOMETIMES JOBS IN THE CONSTRUCTION INDUSTRY ARE DANGEROUS. YOU MUST BE WIDE AWAKE ALL THE TIME.
DANGER BLASTING
TNT

BOOM

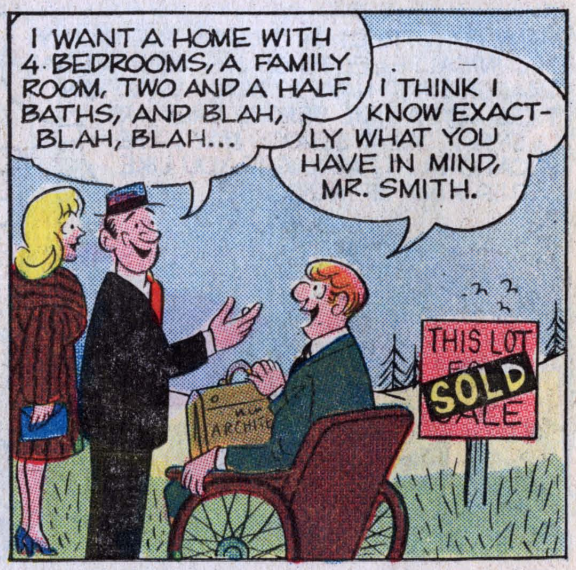

SEE WHAT I MEAN?
2.

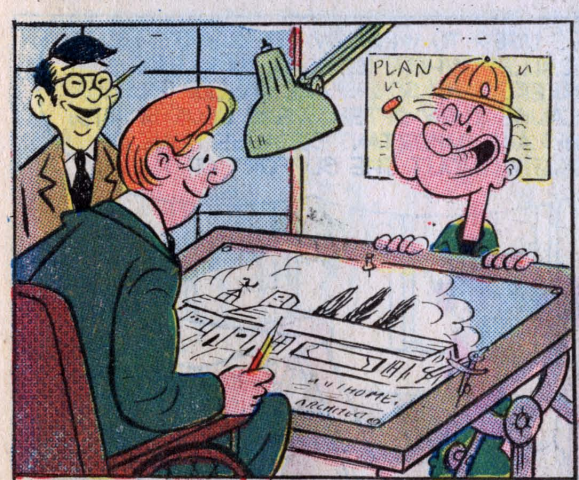

THERE ARE JOBS FOR MEN WHO DON'T FINISH HIGH SCHOOL.
OTHER JOBS IN THE CONSTRUCTION INDUSTRY REQUIRE 4 YEARS OF COLLEGE.... LIKE THIS ARCHITECT.
MANY CONSTRUCTION TRADES ARE HIGHLY TECHNICAL. ELECTRICIANS NEED SPECIAL TRAINING AND HAVE TO WORK AS APPRENTICES FOR A TIME BEFORE THEY ARE LICENSED. YOUR SCHOOL MAY HAVE VOCATIONAL TRAINING IF YOU LIKE THIS KIND OF WORK..
ACE ELECTRICAL CO
MOST CONSTRUCTION MEN IN THE BUILDING TRADES ARE CALLED BLUE COLLAR WORKERS.
PEOPLE WHO WORK IN OFFICES USED TO WEAR WHITE SHIRTS MOST OF THE TIME SO THEY WERE CALLED WHITE COLLAR WORKERS... JUST AS CARPENTERS, IRONWORKERS, AND SO ON, ARE CALLED BLUE COLLAR WORKERS BECAUSE THEY OFTEN WEAR BLUE SHIRTS. ALL OF THESE JOBS ARE IMPORTANT BECAUSE NONE OF THEM COULD BE DONE WITHOUT THE SUPPORT OF THE OTHER JOBS.
3.


BUILDING TRADES CRAFTSMEN ARE EMPLOYED CHIEFLY IN THE CONSTRUCTION, MAINTENANCE, REPAIR, AND ALTERATION OF HOMES AND OTHER TYPES OF BUILDINGS.



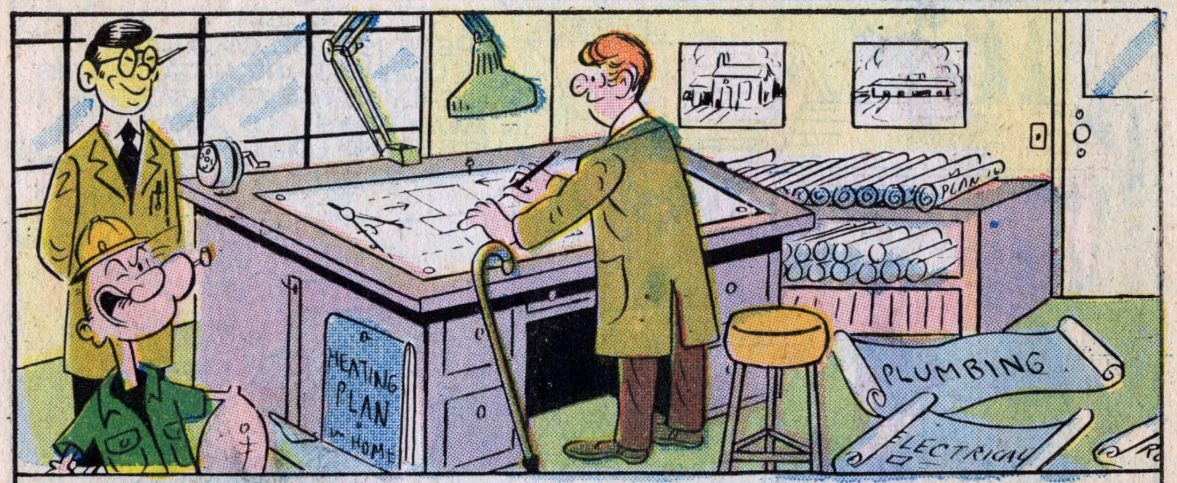
CONSTRUCTION WORKERS DO A WIDE VARIETY OF JOBS. THEY MAY DO ANYTHING FROM FIXING A BROKEN WINDOW TO RUNNING A BULLDOZER.


I WANT A HOME WITH 4 BEDROOMS, A FAMILY ROOM, TWO AND A HALF BATHS, AND BLAH, BLAH, BLAH...
I THINK I KNOW EXACTLY WHAT YOU HAVE IN MIND, MR. SMITH.
THIS LOT
SOLD

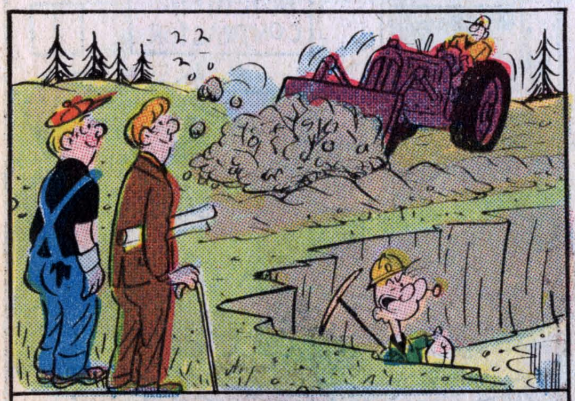


HERE ARE THE ARCHITECTS. THEY HAVE TRIED TO CREATE A HOME THAT WILL CONTAIN EVERYTHING THEIR CLIENT ASKED FOR.

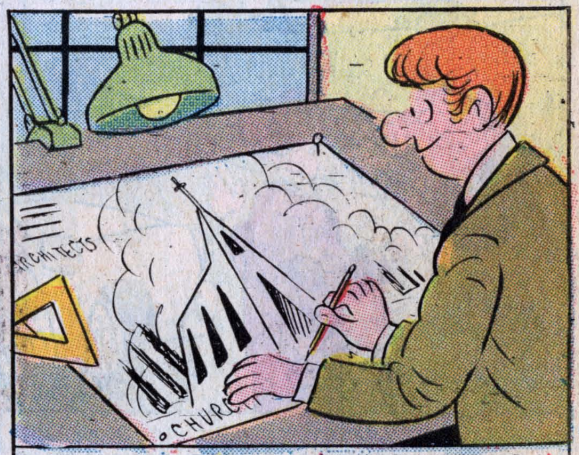
IT'S EXACTLY WHAT WE WANTED, MR. BROWN!
YES....BUT COULD YOU PUT THE KITCHEN ON THIS SIDE OF THE HOUSE AND ADD A LAUNDRY ROOM OVER THERE?
4.



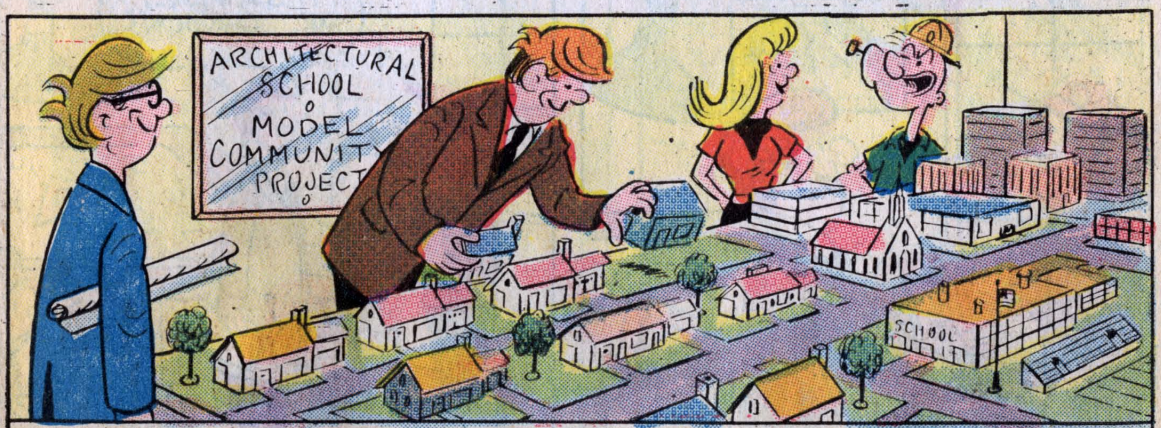
AFTER GETTING THE CLIENT'S APPROVAL, THE ARCHITECT MUST PREPARE DETAILED PLANS OF THE INSIDE AND OUTSIDE. THEN HE MUST PLAN THE PLUMBING, HEATING, WIRING AND EVERYTHING ELSE A MODERN HOME NEEDS.



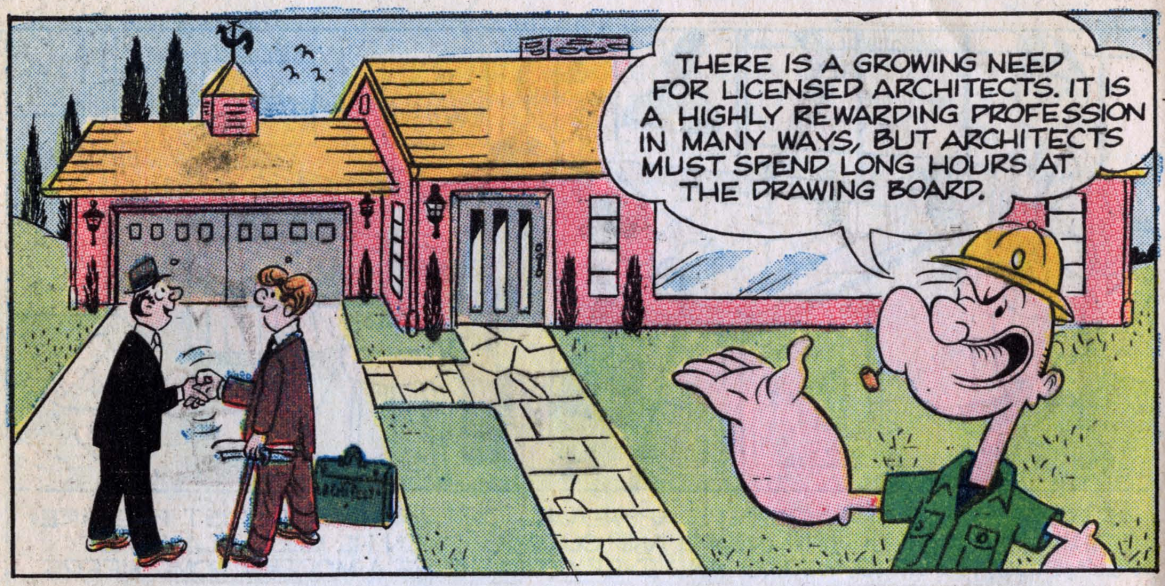
AFTER COMPLETING THE PLANS, THE ARCHITECT THEN HELPS SELECT A BUILDING CONTRACTOR. HE VISITS THE SITE FREQUENTLY, MAKING SURE THE PROPER MATERIALS AND WORKMANSHIP GO INTO THE HOME.

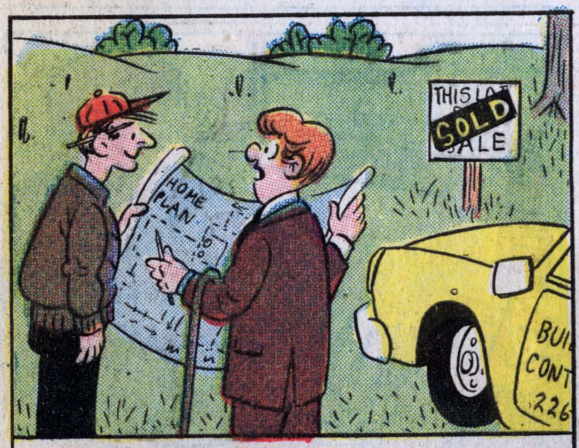


MOST SELF-EMPLOYED ARCHITECTS PLAN A VARIETY OF STRUCTURES RANGING FROM PRIVATE HOMES TO CHURCHES AND HOSPITALS.

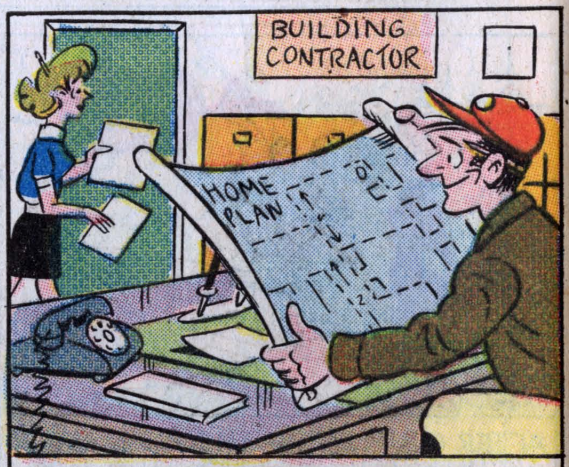


ALL STATES REQUIRE ARCHITECTS TO BE LICENSED TO PRACTICE. ARCHITECTS MUST GRADUATE FROM AN ACCREDITED SCHOOL, THEN SPEND 3 YEARS IN AN ARCHITECT'S OFFICE. SOME STATES ACCEPT 10 TO 12 YEARS OF PRACTICAL EXPERIENCE INSTEAD OF A COLLEGE DEGREE.

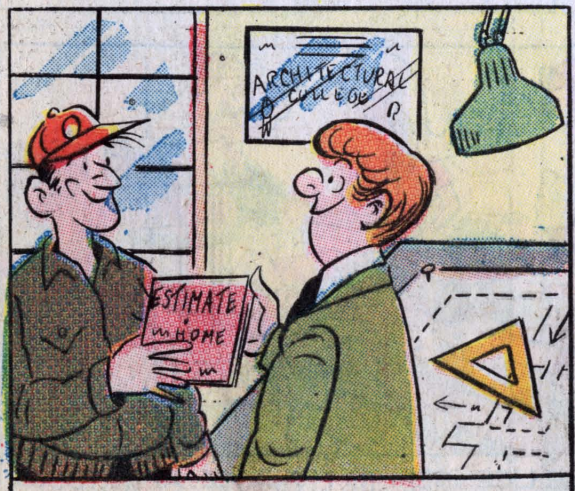

THERE IS A GROWING NEED FOR LICENSED ARCHITECTS. IT IS A HIGHLY REWARDING PROFESSION IN MANY WAYS, BUT ARCHITECTS MUST SPEND LONG HOURS AT THE DRAWING BOARD.



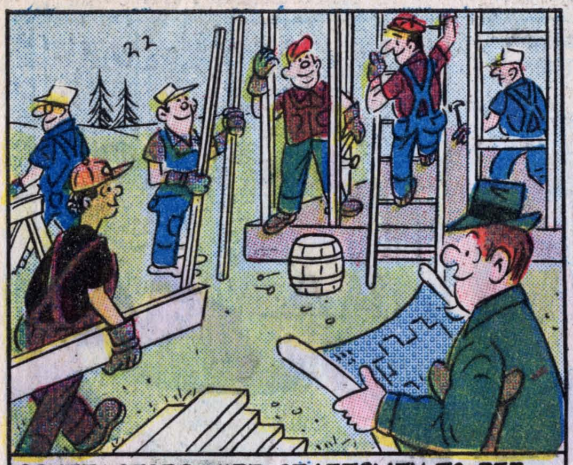
AFTER THE ARCHITECT HAS GOTTEN HIS CLIENT'S APPROVAL, HE HELPS HIM FIND A BUILDING CONTRACTOR AND SHOWS HIM THE HOME SITE AND THE PLANS.



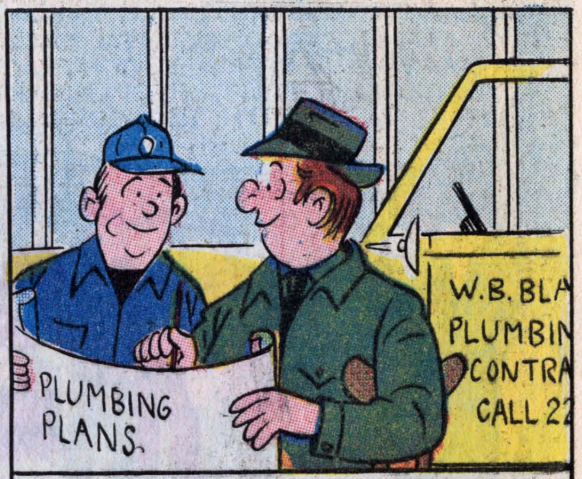
THE CONTRACTOR THEN ESTIMATES THE MATERIAL COSTS AND THE LABOR INVOLVED AND....



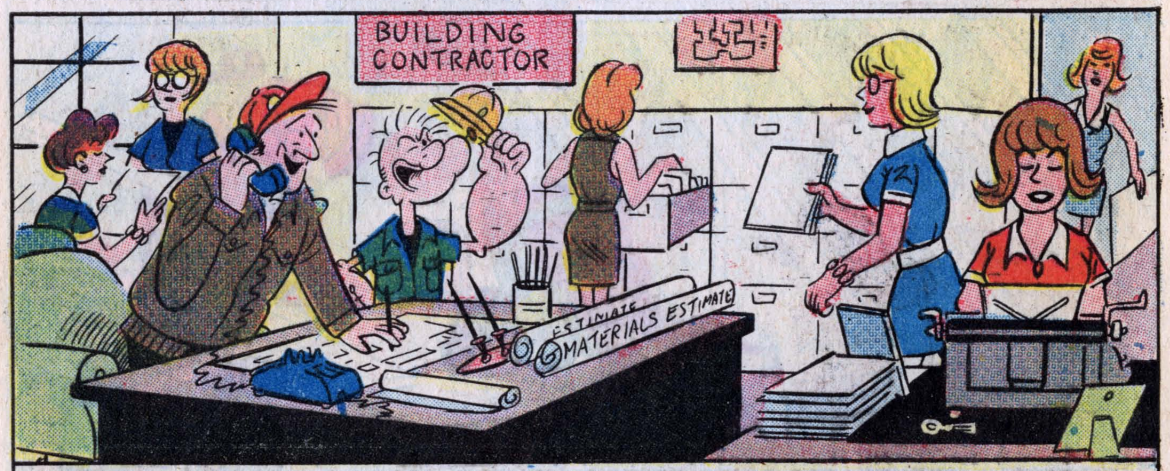
...GIVES THE ARCHITECT AN ESTIMATE OF THE COST.



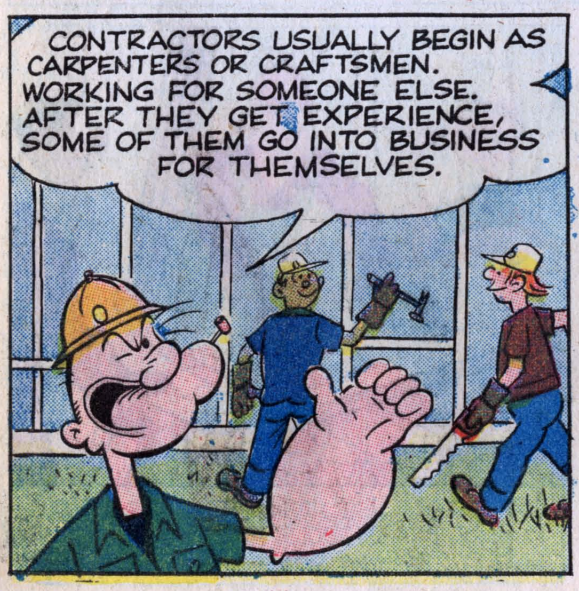
CONTRACTORS HIRE CRAFTSMEN TO PERFORM THE VARIOUS JOBS ON THE BUILDING. THEY ARE RESPONSIBLE FOR BUILDING THE HOUSE RIGHT.

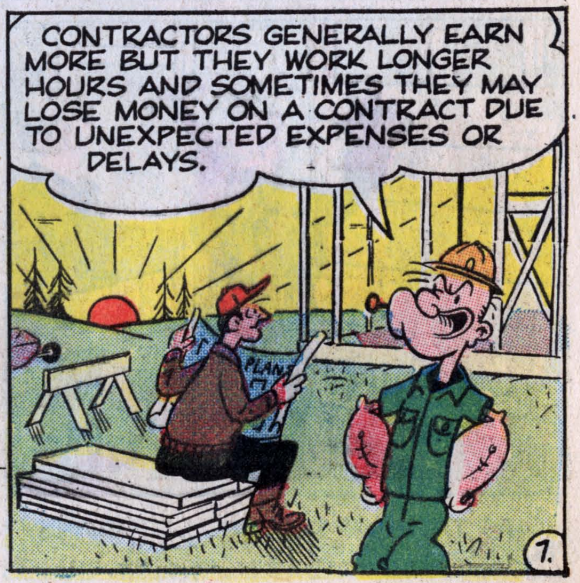


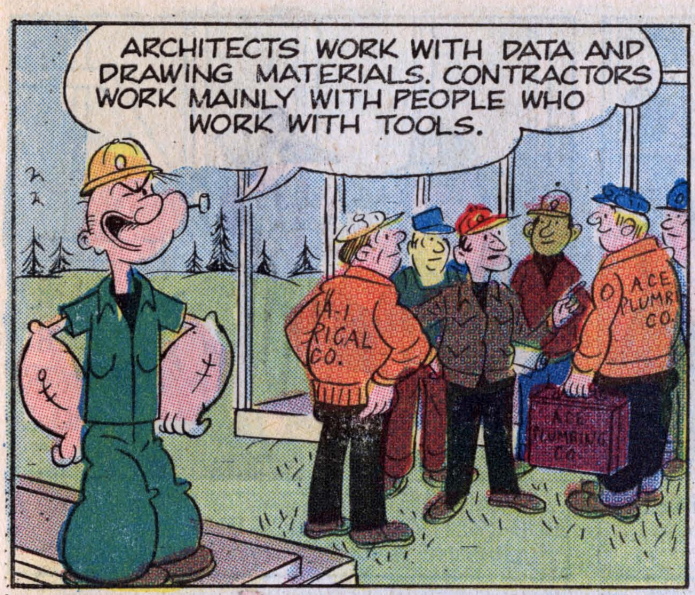
SPECIAL-TRADE CONTRACTORS USUALLY SUB-CONTRACT THINGS SUCH AS PLUMBING AND ELECTRICAL WORK.

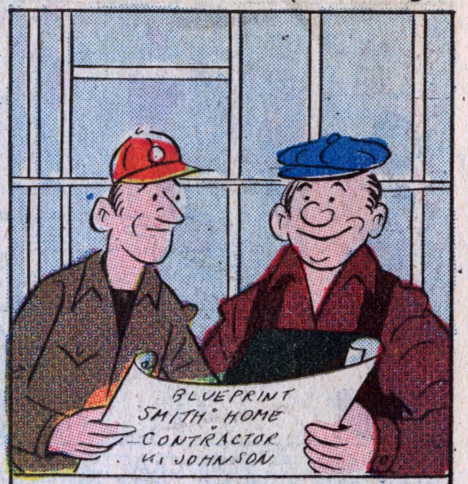


THERE ARE SEVERAL HUNDRED THOUSAND CONTRACTORS, BOTH GENERAL AND SPECIAL-TRADE. WHILE MEN ARE USUALLY HIRED FOR ACTUAL CONSTRUCTION, MANY WOMEN WORK IN THE CONTRACTORS' OFFICES AND ARE TRAINING FOR VARIOUS CONSTRUCTION JOBS.

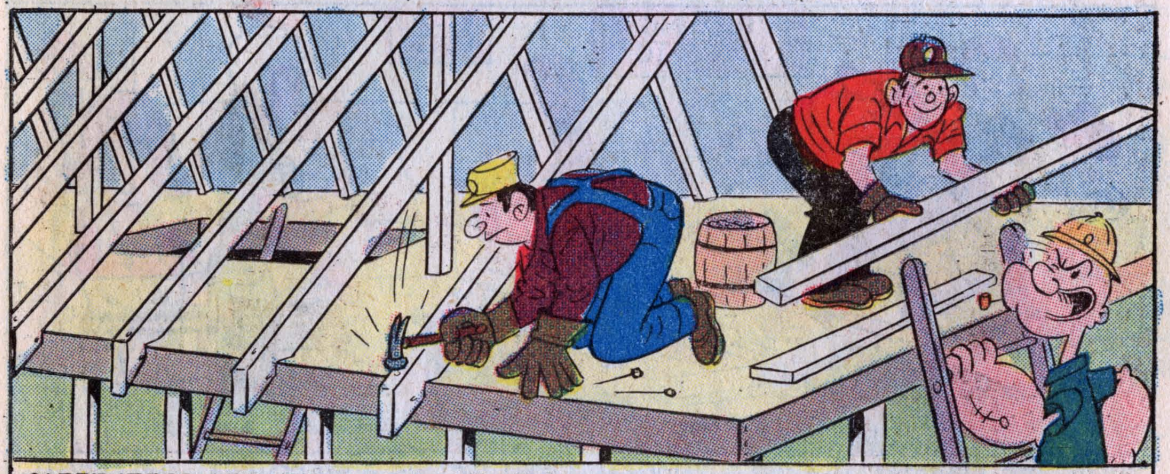

CONTRACTORS USUALLY BEGIN AS CARPENTERS OR CRAFTSMEN. WORKING FOR SOMEONE ELSE. AFTER THEY GET EXPERIENCE, SOME OF THEM GO INTO BUSINESS FOR THEMSELVES.


CONTRACTORS GENERALLY EARN MORE BUT THEY WORK LONGER HOURS AND SOMETIMES THEY MAY LOSE MONEY ON A CONTRACT DUE TO UNEXPECTED EXPENSES OR DELAYS.

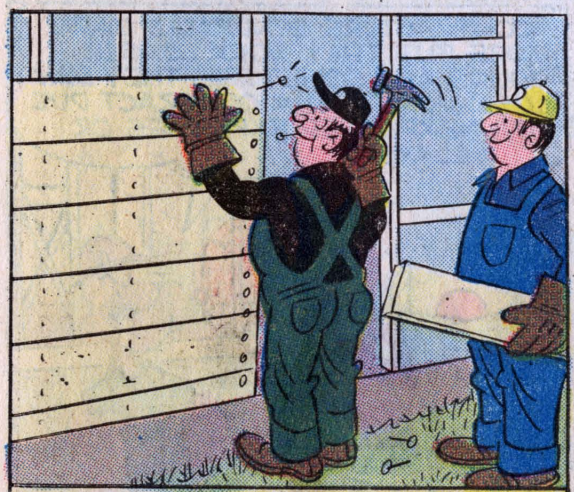

ARCHITECTS WORK WITH DATA AND DRAWING MATERIALS. CONTRACTORS WORK MAINLY WITH PEOPLE WHO WORK WITH TOOLS.
A-1 RIGAL CO.
ACE PLUMR CO.
A-1 PLUMBING CO.



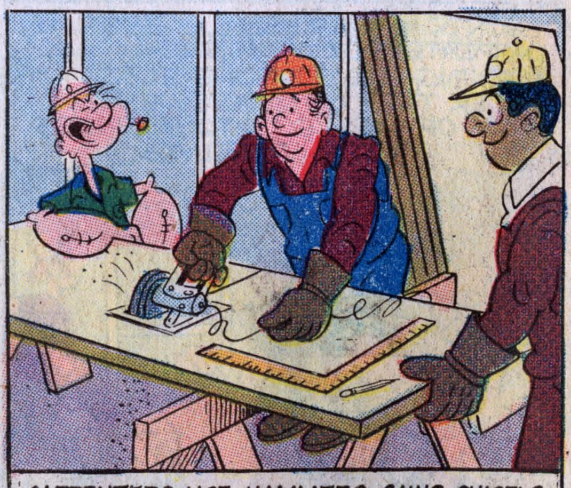
THE CONTRACTOR USUALLY HAS A CARPENTER FOREMAN WHO CAN READ ARCHITECTS' BLUEPRINTS.



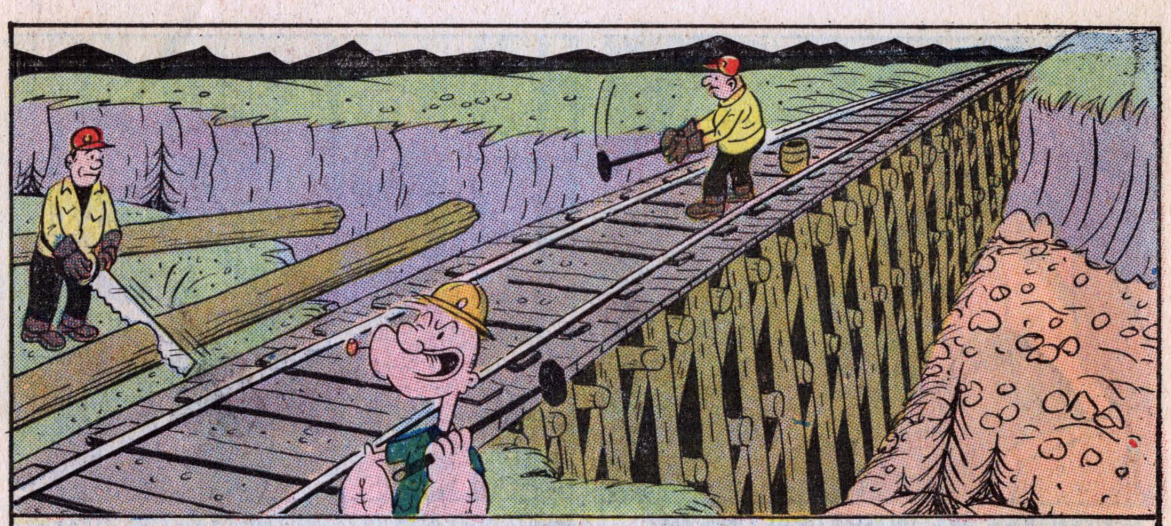
CARPENTERS ARE THE LARGEST GROUP OF BUILDING TRADE WORKERS. THEY ARE EMPLOYED IN ALMOST ALL TYPES OF CONSTRUCTION ACTIVITY. THEY ERECT THE WOOD FRAMEWORK OF THE BUILDING....



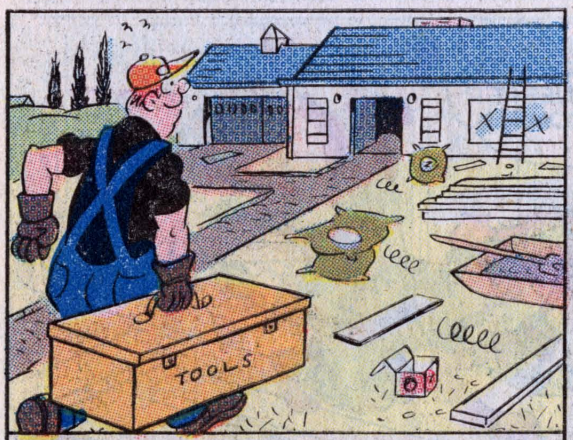
...AND THEN ADD SHEATHING, STUDDING, BUILD STAIRS AND LAY FLOORS.



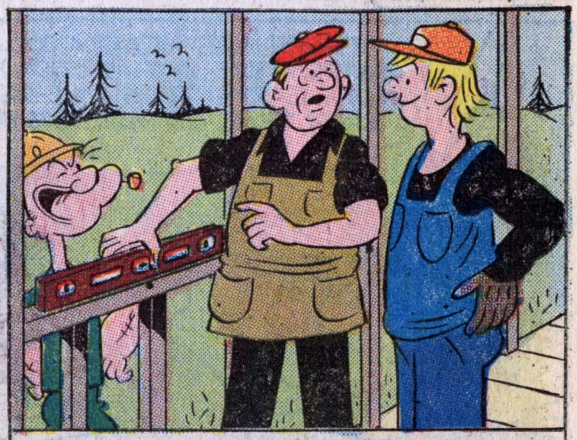
CARPENTERS USE HAMMERS, SAWS, CHISELS, PLANES, POWER TOOLS, AND RIVET GUNS. SAFETY TRAINING IS IMPORTANT.



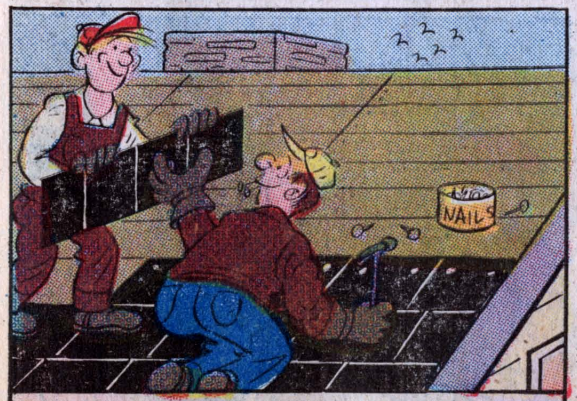
CARPENTERS ALSO INSTALL FORMS FOR DAMS AND BRIDGES, TIMBERS FOR DOCKS AND SHORING TO HOLD BACK EARTH IN EXCAVATIONS AND SIMILAR STRUCTURES.



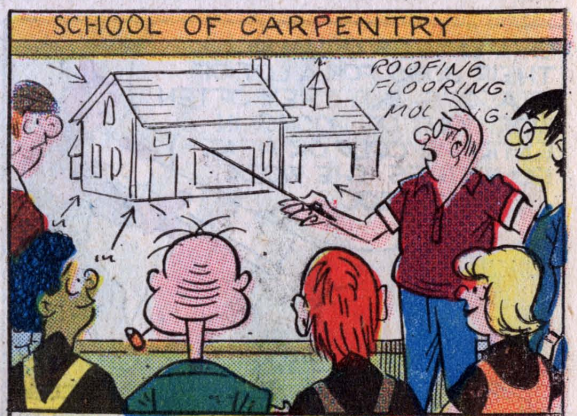
MOST CARPENTERS OWN THEIR OWN BASIC TOOLS. HEAVY POWER TOOLS ARE USUALLY SUPPLIED BY THE CONTRACTOR.



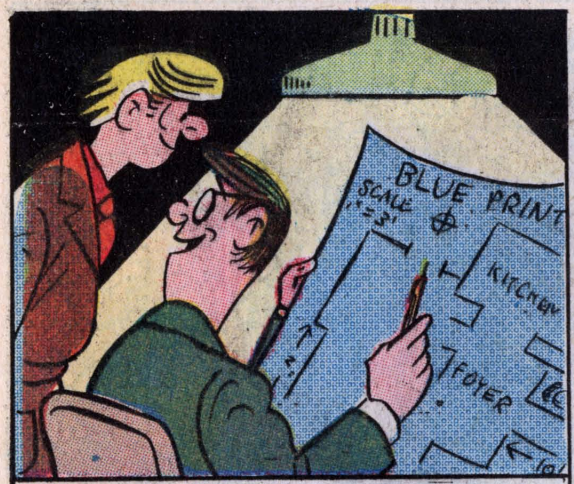
LABOR AUTHORITIES RECOMMEND A 4-YEAR APPRENTICESHIP PROGRAM AS THE BEST WAY TO LEARN CARPENTRY. APPRENTICES EARN WHILE LEARNING.



APPRENTICES SHOULD BE BETWEEN 17 AND 27 YEARS OF AGE. A HIGH SCHOOL OR VOCATIONAL SCHOOL EDUCATION IS DESIRABLE, AND THEY SHOULD BE IN GOOD PHYSICAL CONDITION. APPRENTICES SHOULD BE HANDY WITH TOOLS. THEY MUST BE DEPENDABLE.

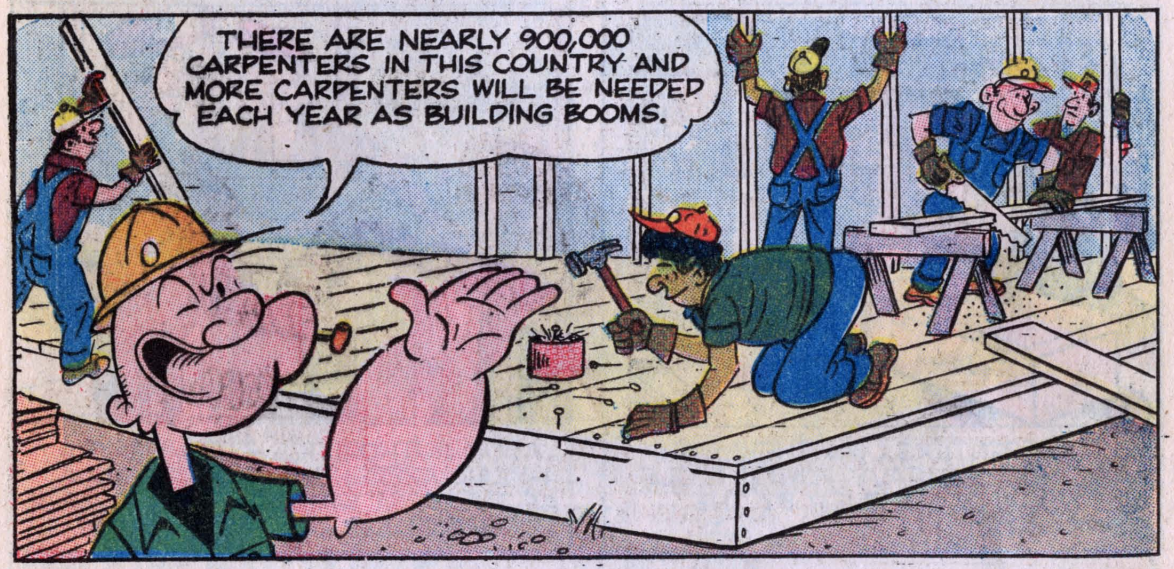


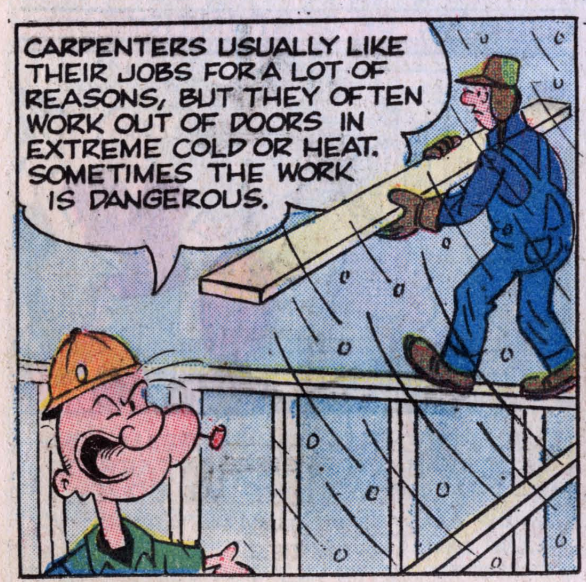
THE APPRENTICESHIP PROGRAM CONSISTS OF 8,000 HOURS (4 YEARS) OF ON-THE-JOB TRAINING AND SOMETIMES REQUIRES RELATED CLASSROOM INSTRUCTION.

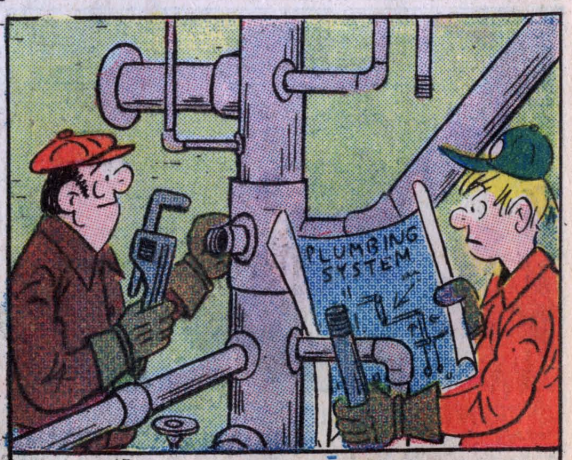


APPRENTICES ARE TAUGHT DRAFTING AND BLUEPRINT READING, MATHEMATICS AND THE USE OF WOODWORKING MACHINES.

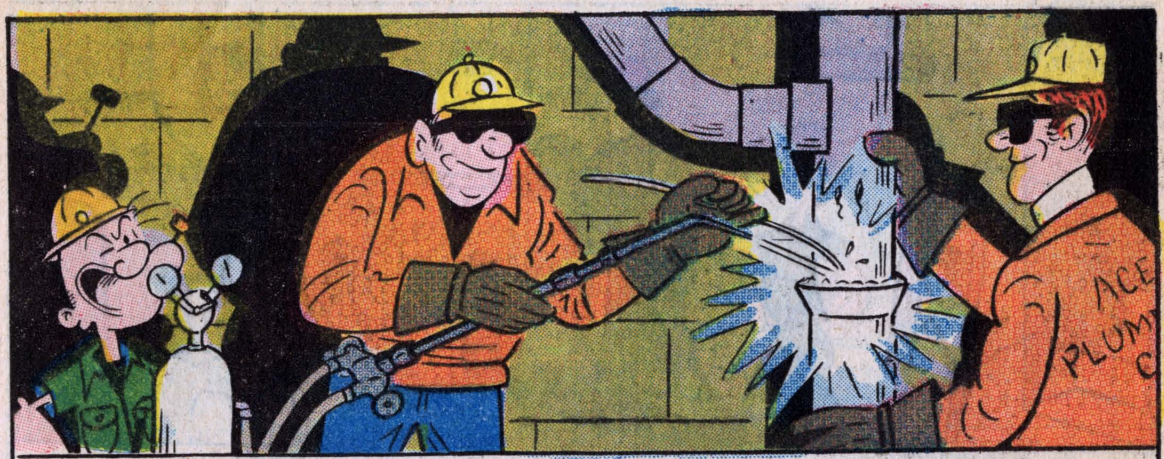
BOTH IN CLASS AND ON THE JOB, THE APPRENTICE LEARNS THE RELATIONSHIP BETWEEN CARPENTRY AND OTHER BUILDING TRADES.



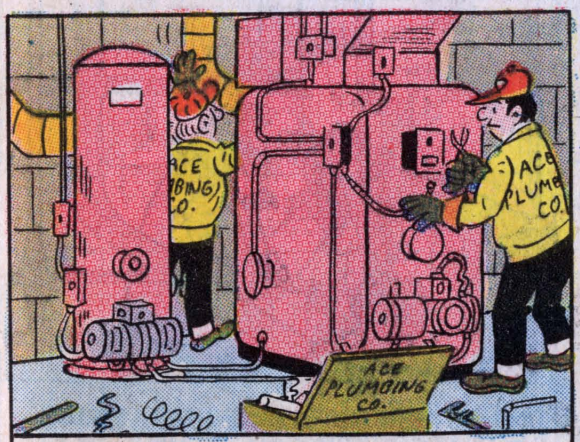

CARPENTERS USUALLY LIKE THEIR JOBS FOR A LOT OF REASONS, BUT THEY OFTEN WORK OUT OF DOORS IN EXTREME COLD OR HEAT. SOMETIMES THE WORK IS DANGEROUS.



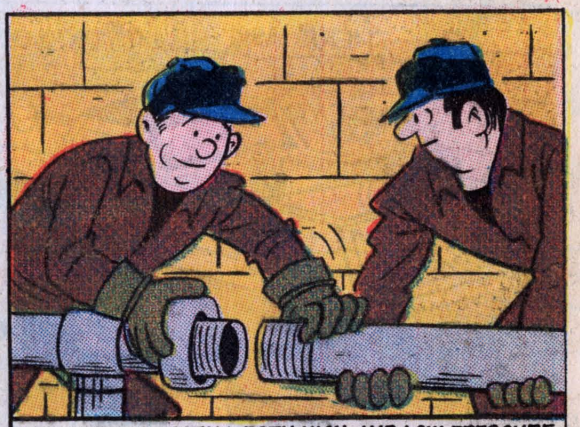
PLUMBERS AND PIPEFITTERS ARE CRAFTSMEN WHO INSTALL PIPE SYSTEMS THAT CARRY WATER, STEAM, OTHER LIQUIDS OR GASES.



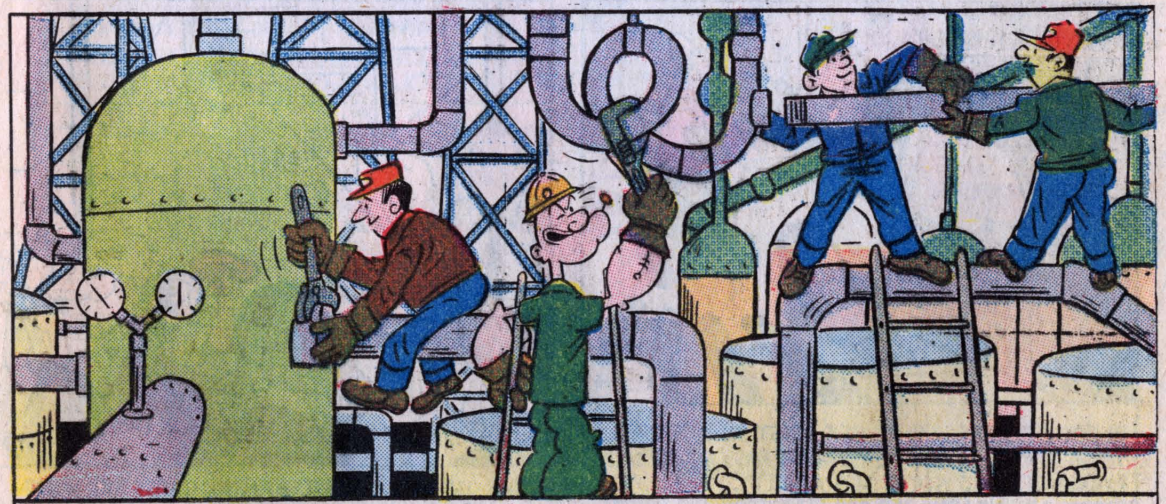
ALTHOUGH PLUMBING AND PIPEFITTING ARE OFTEN CONSIDERED TO BE A SINGLE TRADE, MOST WORKERS SPECIALIZE IN ONE OR THE OTHER. WATER, GAS, AND WASTE DISPOSAL SYSTEMS ARE INSTALLED BY PLUMBERS, ESPECIALLY IN RESIDENTIAL AND COMMERCIAL BUILDINGS.



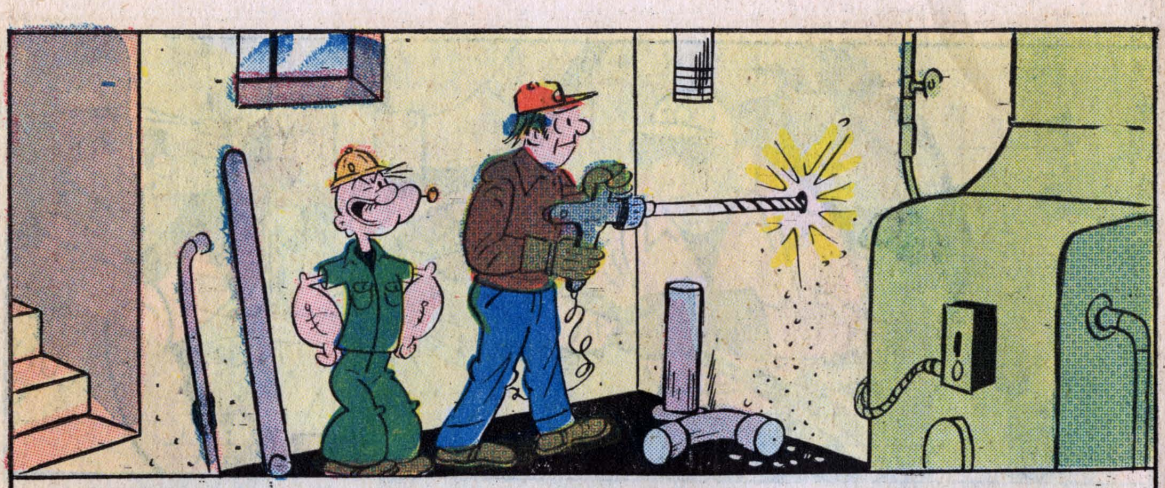
PLUMBERS USUALLY 'ROUGH IN' THE PIPE SYSTEM AS THE HOUSE IS BEING BUILT AND INSTALL THE HEATING AND AIR CONDITIONING AS THE HOUSE IS BEING FINISHED.



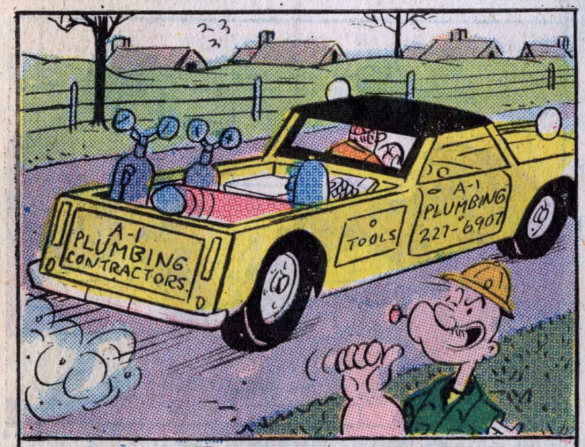
PIPEFITTERS INSTALL BOTH HIGH AND LOW PRESSURE SYSTEMS THAT CARRY HOT WATER, STEAM, AND OTHER LIQUIDS, ESPECIALLY IN INDUSTRIAL AND COMMERCIAL BUILDINGS. SEVERE DAMAGE MAY RESULT IF THEY ARE NOT SKILLED AND RELIABLE.



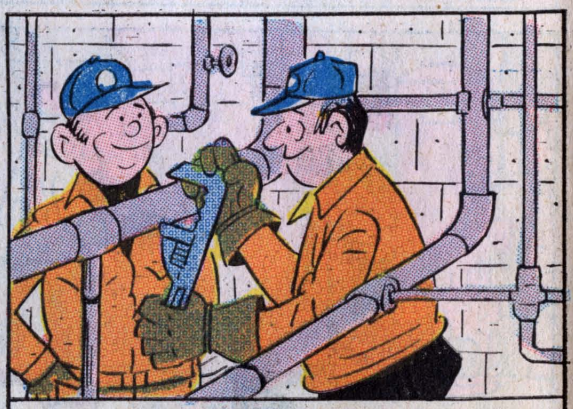
PIPEFITTERS, FOR EXAMPLE, INSTALL AMMONIA-CARRYING PIPELINES IN REFRIGERATION PLANTS, AND COMPLEX PIPE SYSTEMS IN OIL REFINERIES.



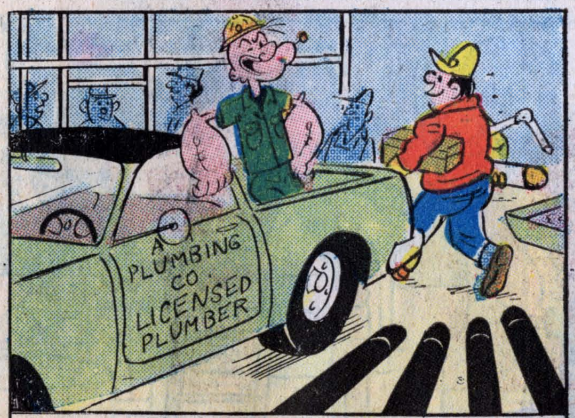
PLUMBERS AND PIPEFITTERS HAVE A VARIETY OF SKILLS. THEY BEND PIPE, WELD, BRAZE, CALK, AND SOLDER JOINTS. THEY USE DRILLS, WRENCHES, REAMERS, HAMMERS, POWER MACHINERY AND WELDING EQUIPMENT.



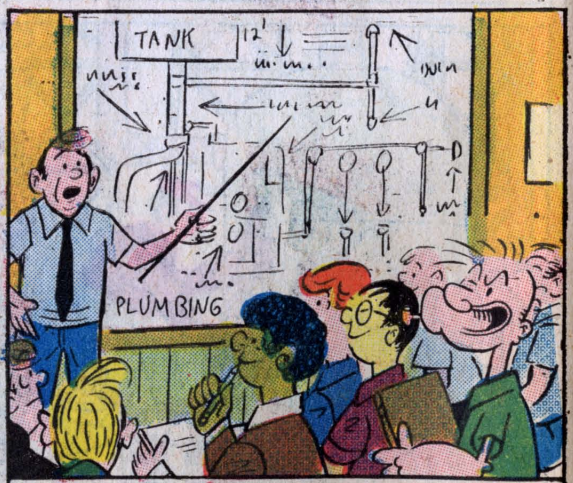
MOST PLUMBERS AND PIPEFITTERS ARE EMPLOYED BY PLUMBING CONTRACTORS IN NEW CONSTRUCTION ACTIVITY. MANY OTHERS ARE SELF-EMPLOYED, DOING REPAIR AND MODERNIZATION WORK.



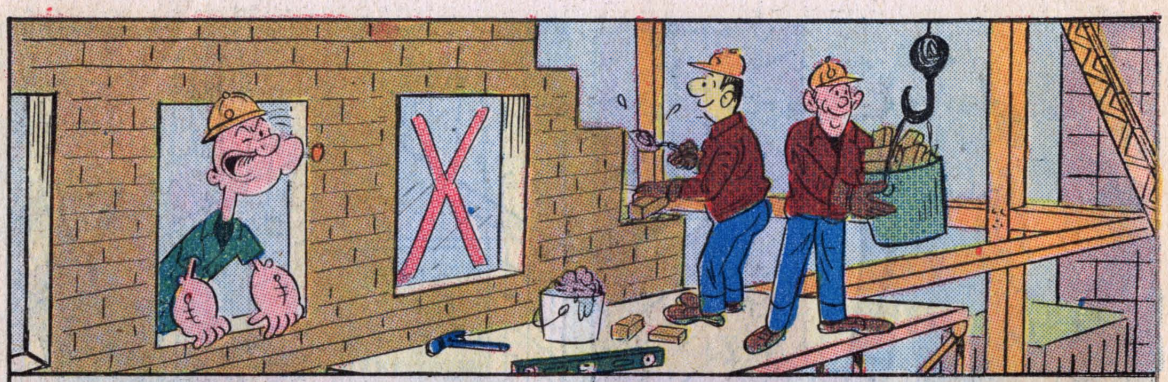
TRAINING AUTHORITIES RECOMMEND A FORMAL, 5-YEAR APPRENTICESHIP FOR PLUMBERS OR PIPEFITTERS. SOME LEARN THE TRADE BY WORKING WITH EXPERIENCED CRAFTSMEN. SOME ALSO TAKE TRADE OR CORRESPONDENCE SCHOOL COURSES.



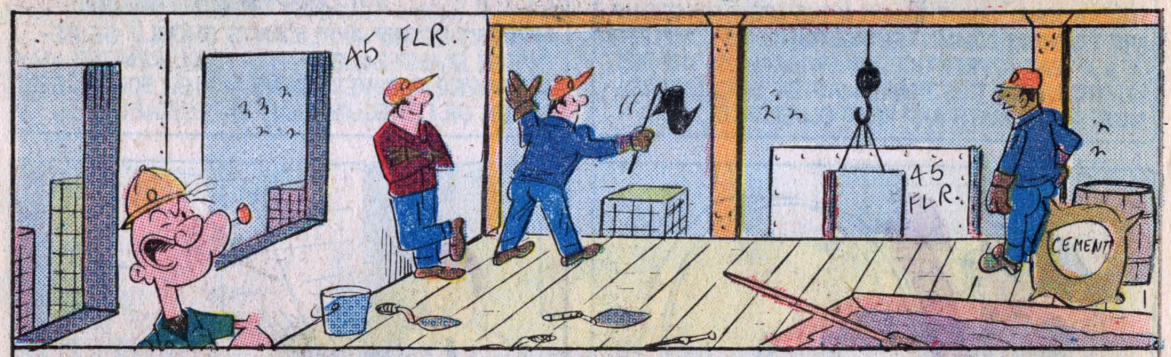
IN SOME PLACES A PLUMBER MUST BE LICENSED. TO OBTAIN THIS LICENSE HE MUST PASS A SPECIAL EXAMINATION TO SHOW HIS ABILITY. THERE ARE NEARLY 350,000 PLUMBERS AND PIPEFITTERS WORKING IN THIS COUNTRY. MOST JOIN A UNION.



LIKE THE CARPENTERS, APPRENTICES ARE SOMETIMES ASKED TO TAKE EXTRA CLASSROOM INSTRUCTION EACH YEAR FOR FIVE YEARS.

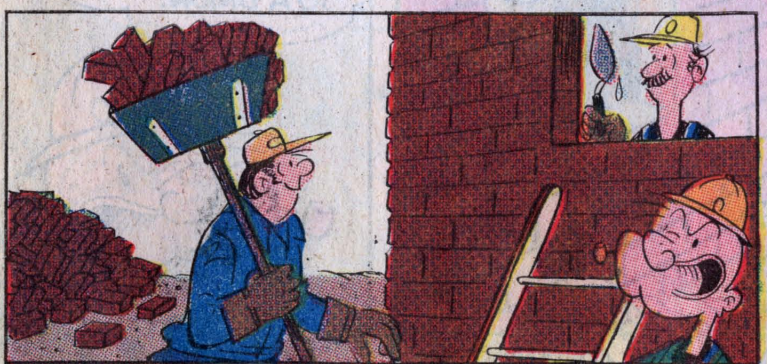


BRICKLAYERS CONSTRUCT WALLS, PARTITIONS, FIREPLACES AND CHIMNEYS FROM BRICK.

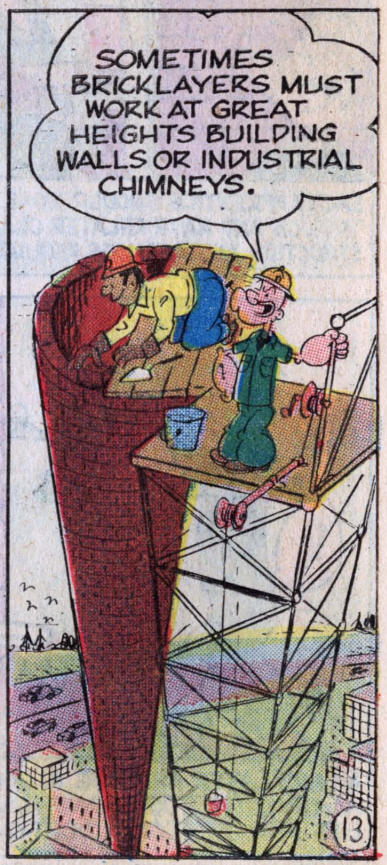


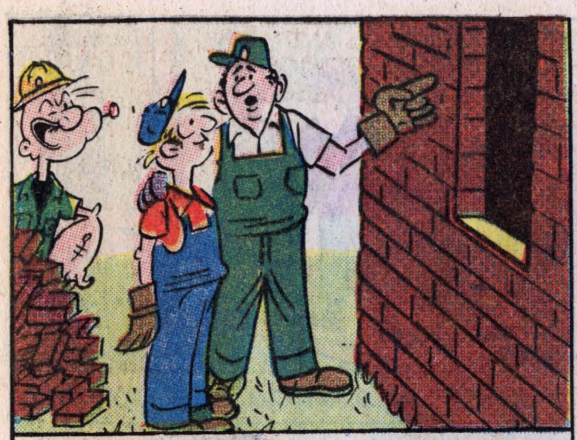
THEY ALSO WORK WITH OTHER MASONRY MATERIALS SUCH AS CONCRETE BLOCKS, PRECAST CONCRETE PANELS OR MARBLE PANELS.

BRICK WALLS MUST BE BUILT STRAIGHT, USING TROWELS, BRICK HAMMER, LEVELS, JOINTERS AND CUTTING CHISELS

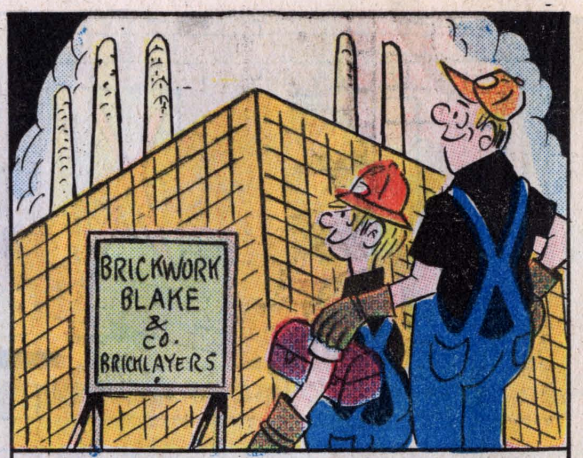


JOURNEYMEN BRICKLAYERS ARE USUALLY ASSISTED BY HOD CARRIERS AND HELPERS.

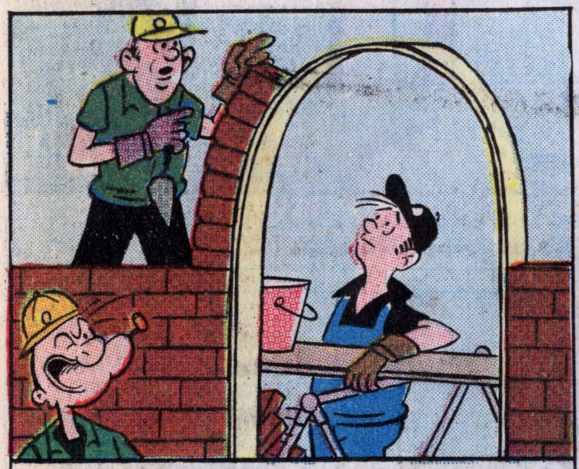




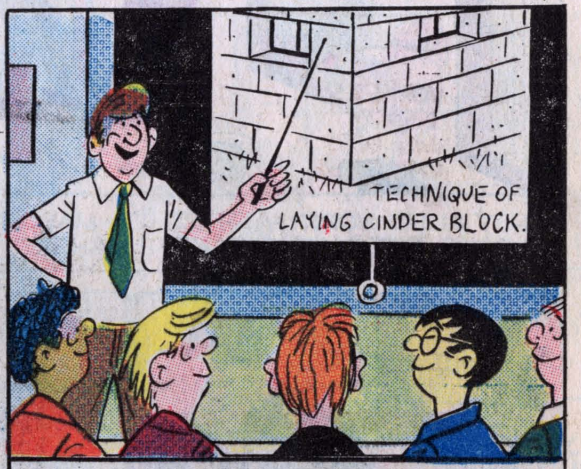
THE NATIONAL JOINT BRICKLAYING APPRENTICESHIP AND TRAINING COMMITTEE RECOMMENDS COMPLETION OF A 3-YEAR APPRENTICESHIP PROGRAM AS THE BEST WAY TO LEARN THIS TRADE. MASTER BRICKLAYERS MUST KNOW MATH AND READ BLUEPRINTS.



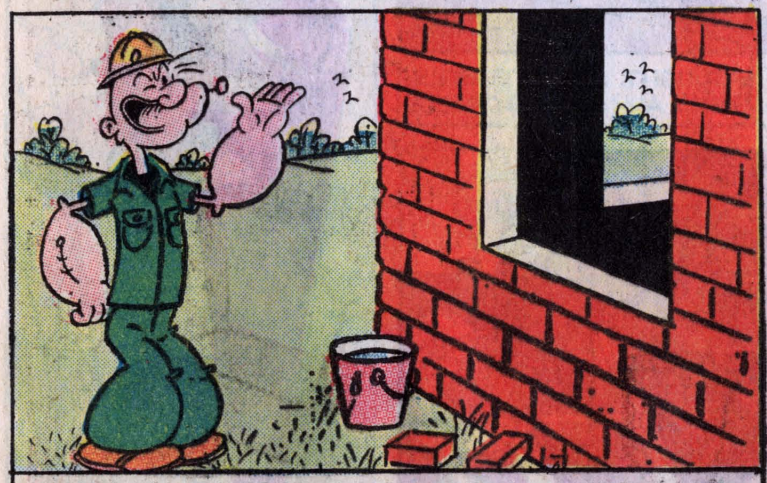
APPRENTICESHIP APPLICANTS SHOULD BE BETWEEN 17 AND 24, BUT THIS REQUIREMENT MAY BE WAIVED FOR VETERANS. A HIGH SCHOOL EDUCATION OR ITS EQUIVALENT IS DESIRABLE.



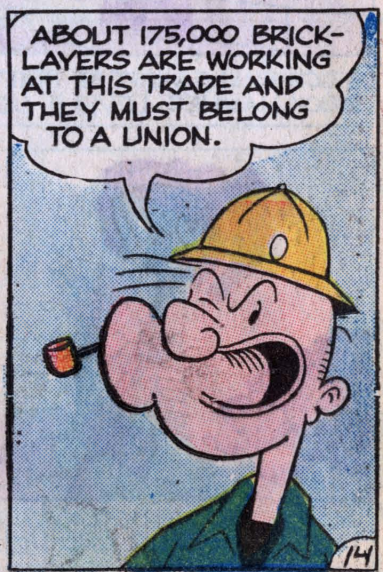
EACH APPRENTICE SHOULD WORK 6,000 HOURS ON THE JOB AND HAVE RELATED CLASSROOM INSTRUCTION AS SOME JOBS REQUIRE GREAT SKILL.

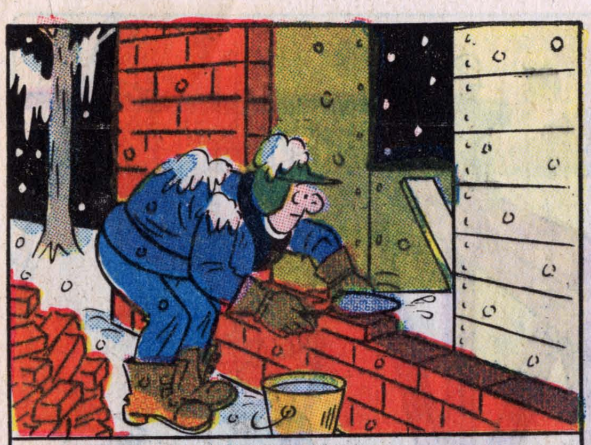


SOMETIMES BRICKLAYER APPRENTICES ARE TAUGHT AT A VOCATIONAL SCHOOL.

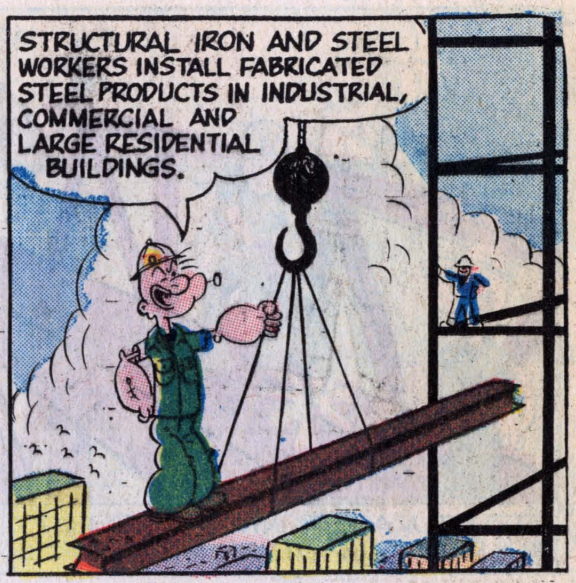


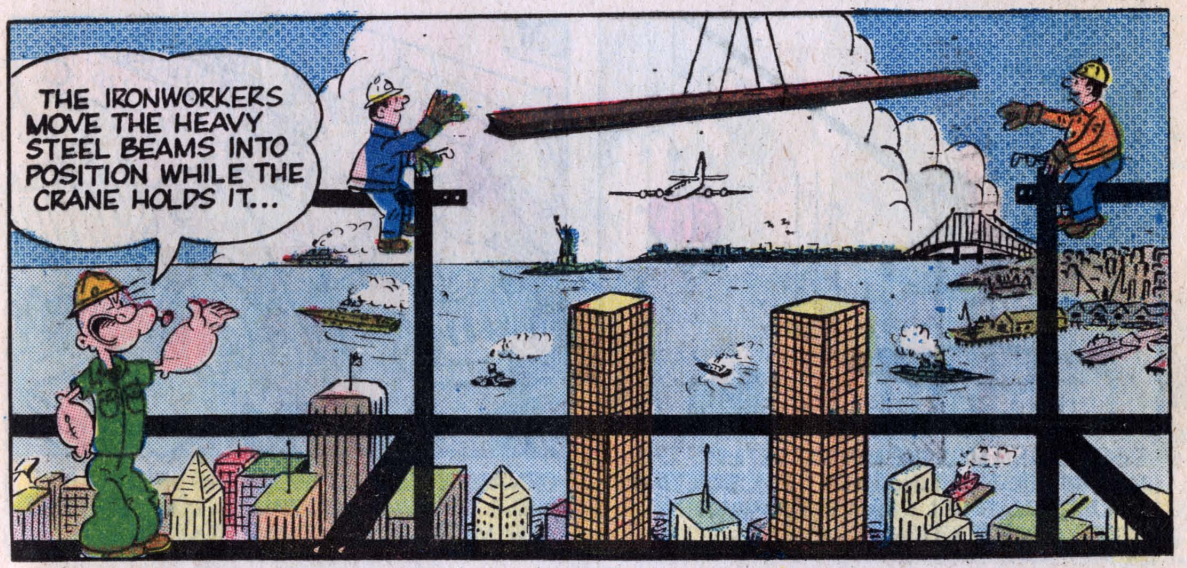
A BRICKLAYER MUST BE IN GOOD PHYSICAL CONDITION, BE HANDY WITH TOOLS AND HAVE A GOOD EYE FOR A STRAIGHT LINE AND CORRECT PROPORTION.

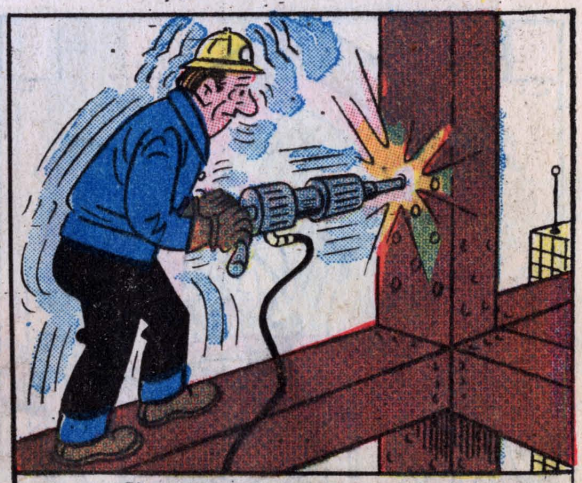




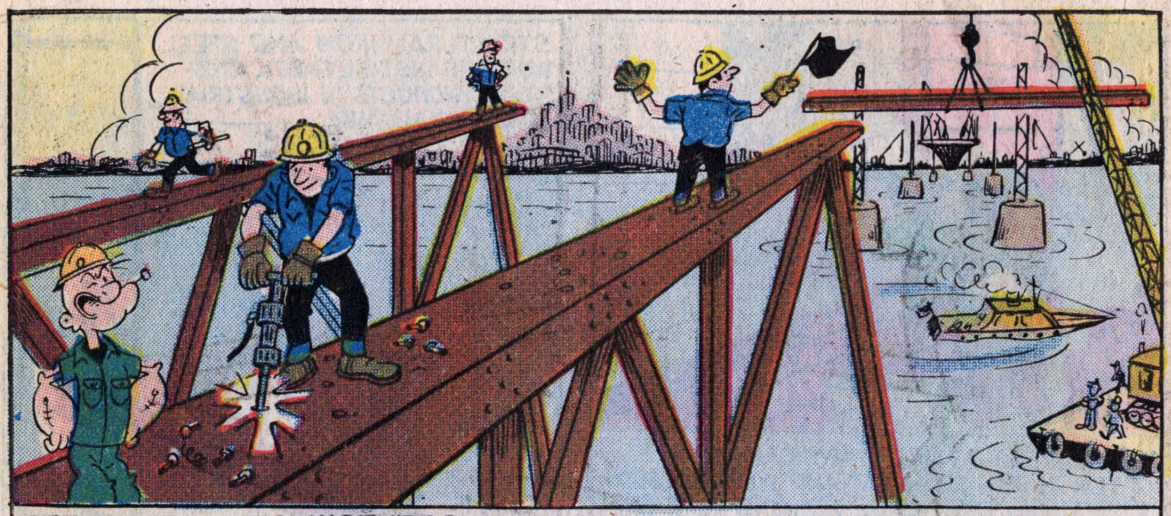
BRICKLAYERS DO HARD PHYSICAL WORK, OFTEN IN SUMMER HEAT AND WINTER COLD. SOMETIMES THEY LOSE WORKING TIME BECAUSE OF BAD WEATHER, BUT BRICKLAYERS TAKE GREAT PRIDE IN THEIR WORK.


STRUCTURAL IRON AND STEEL WORKERS INSTALL FABRICATED STEEL PRODUCTS IN INDUSTRIAL, COMMERCIAL AND LARGE RESIDENTIAL BUILDINGS.

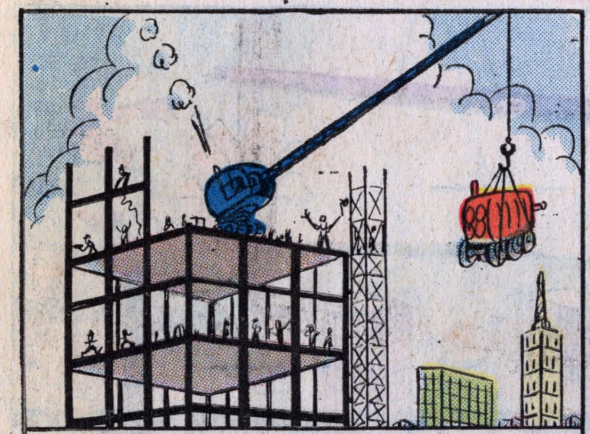




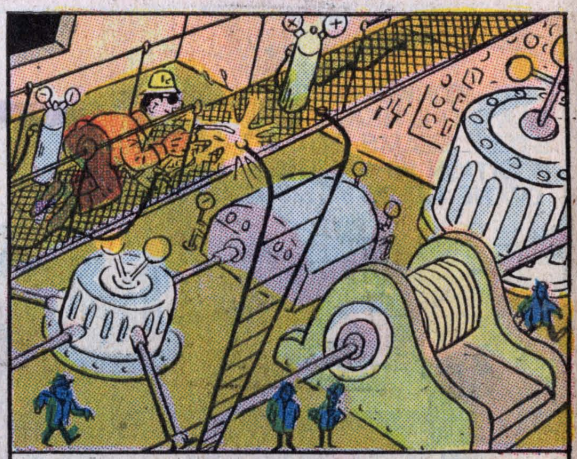
STRUCTURAL STEEL WORKERS USUALLY SPECIALIZE IN A PARTICULAR OPERATION SUCH AS WELDING OR RIVETING.



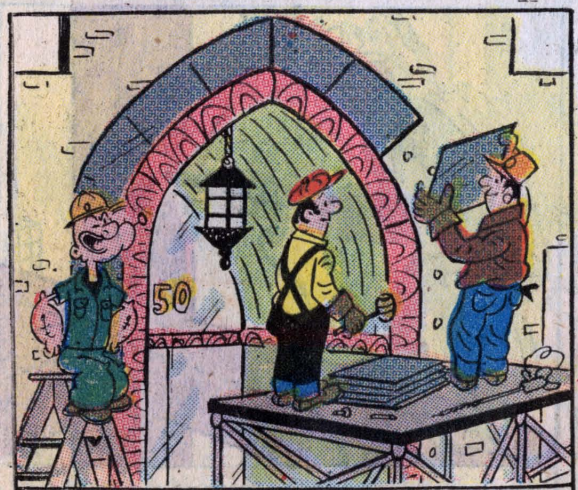
STRUCTURAL-IRONWORKERS ERECT THE STEEL FRAMEWORKS OF BRIDGES, BUILDINGS AND OTHER STRUCTURES.



RIGGERS AND MACHINE MOVERS SET UP AND RIG HOISTING EQUIPMENT FOR ERECTING STRUCTURAL STEEL FRAMES AND MOVING HEAVY CONSTRUCTION EQUIPMENT.

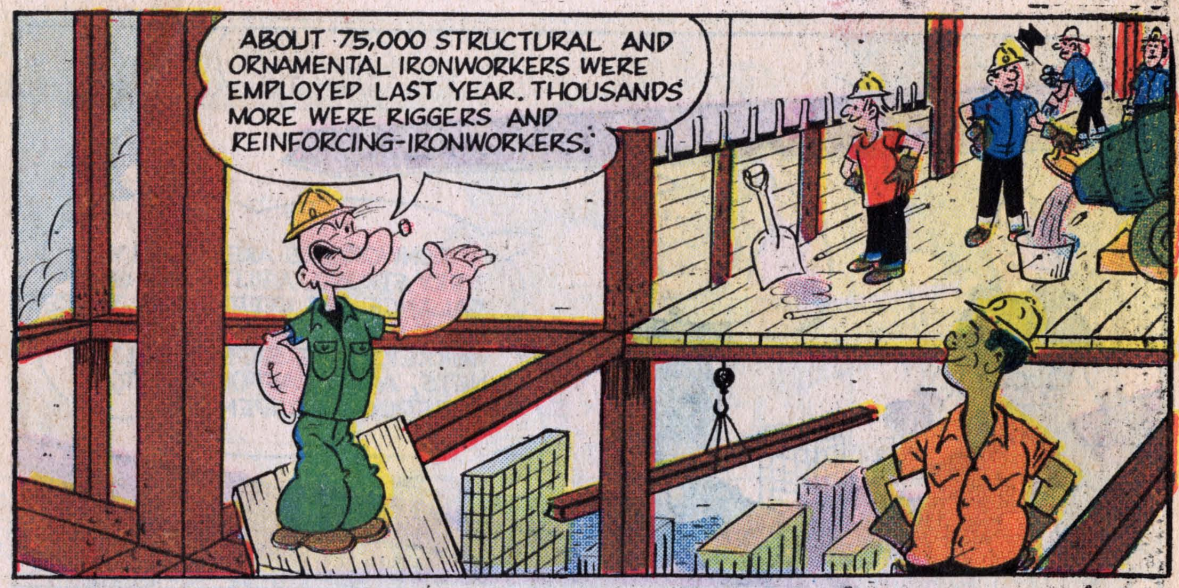


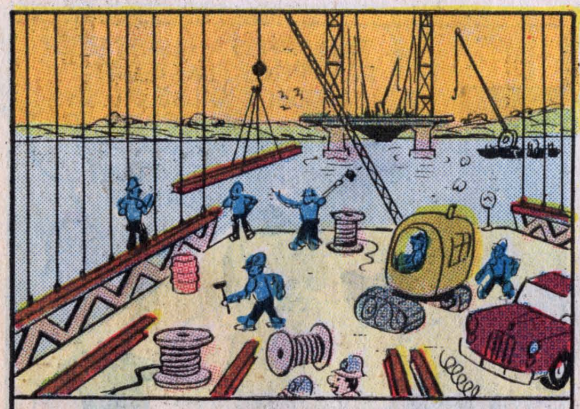
ORNAMENTAL-IRONWORKERS INSTALL METAL STAIRWAYS, CATWALKS, FLOOR GRATINGS AND METAL WINDOWS AND DOORS.



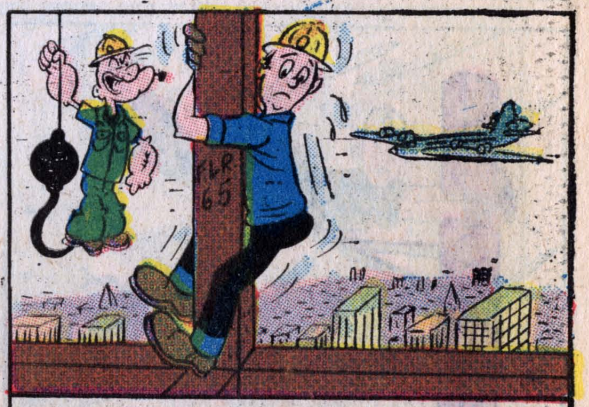
THEY ALSO INSTALL DECORATIVE IRONWORK ON BUILDINGS AND HOMES.

REINFORCING-IRONWORKERS SET STEEL BARS IN CONCRETE FORMS TO REINFORCE CONCRETE STRUCTURES.

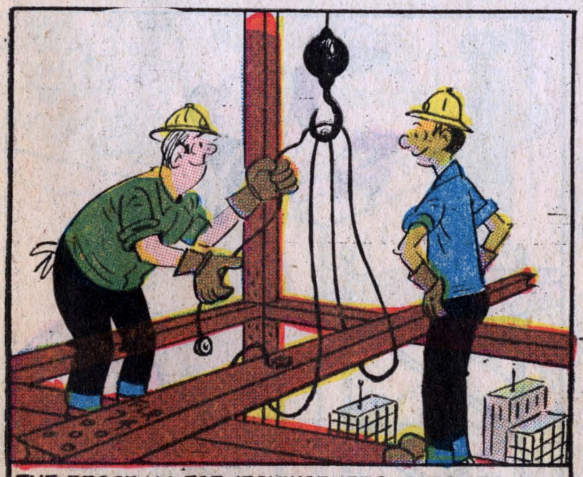

ABOUT 75,000 STRUCTURAL AND ORNAMENTAL IRONWORKERS WERE EMPLOYED LAST YEAR. THOUSANDS MORE WERE RIGGERS AND REINFORCING-IRONWORKERS.



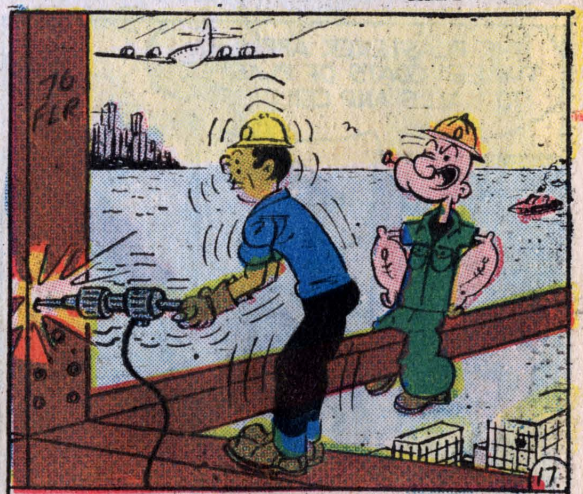
MOST OF THEM WORKED FOR GENERAL CONTRACTORS ON LARGE BUILDINGS. SOME WERE EMPLOYED BY STEEL COMPANIES ON BRIDGES, DAMS AND OTHER LARGE PROJECTS, WHILE OTHERS WORKED FOR THE GOVERNMENT AND PUBLIC UTILITIES.



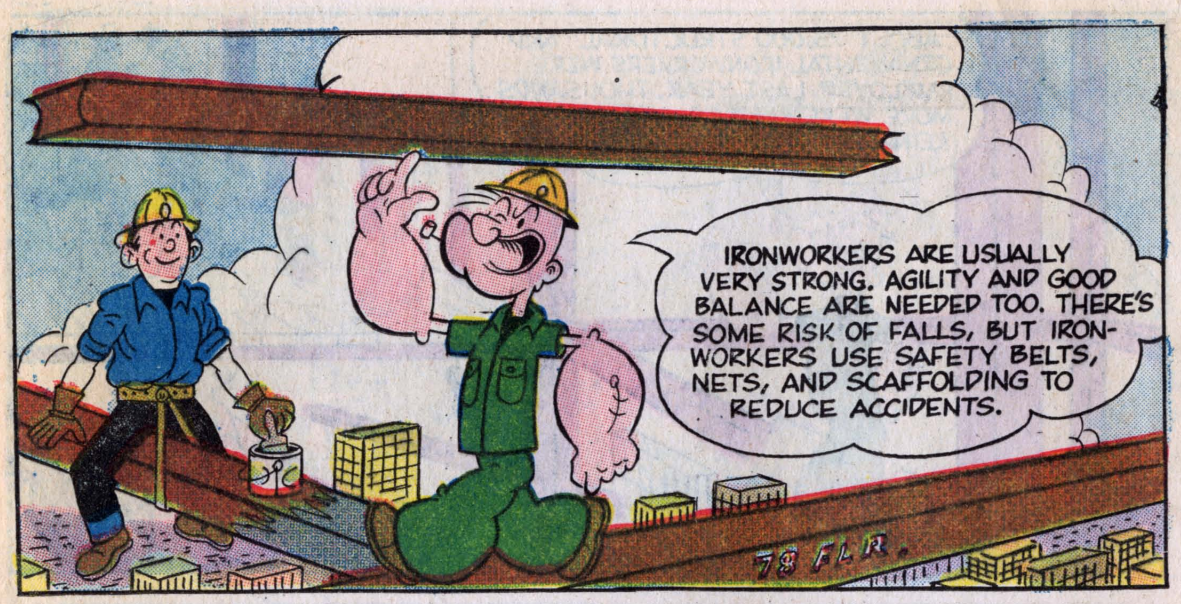
TRAINING AUTHORITIES RECOMMEND COMPLETION OF A 3-YEAR APPRENTICESHIP AS THE BEST WAY TO LEARN THE TRADE. APPLICANTS SHOULD BE BETWEEN 18 AND 30, IN GOOD PHYSICAL CONDITION. A VOCATIONAL HIGH SCHOOL EDUCATION IS DESIRABLE.

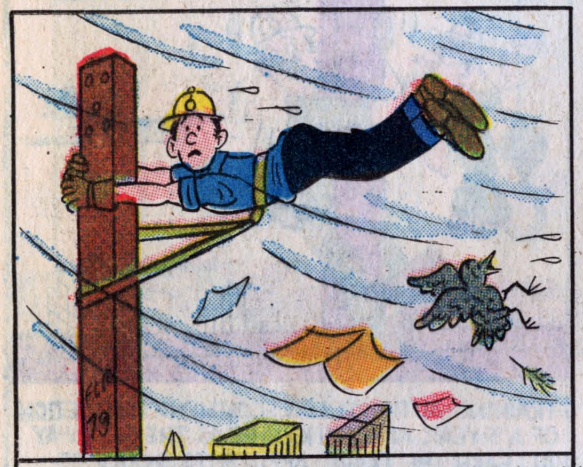


THE PROGRAM FOR IRONWORKERS CONSISTS OF 6,000 HOURS OF ON-THE-JOB TRAINING FROM AN EXPERIENCED JOURNEYMAN.

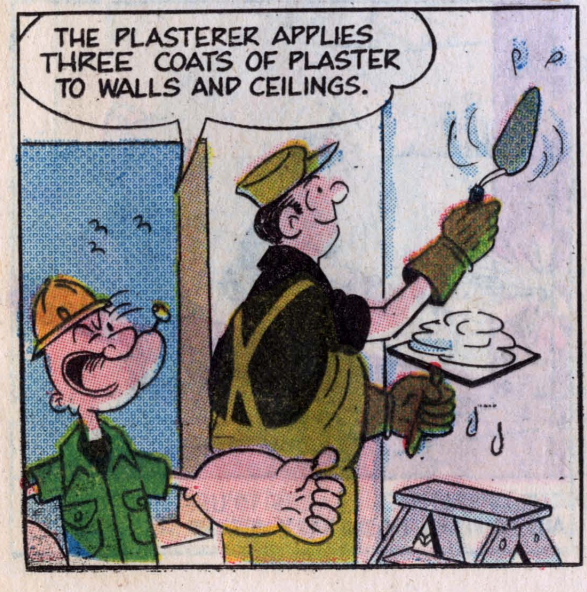


THE APPRENTICE LEARNS TO USE THE TOOLS AND EQUIPMENT COMMONLY NEEDED IN THE TRADE.

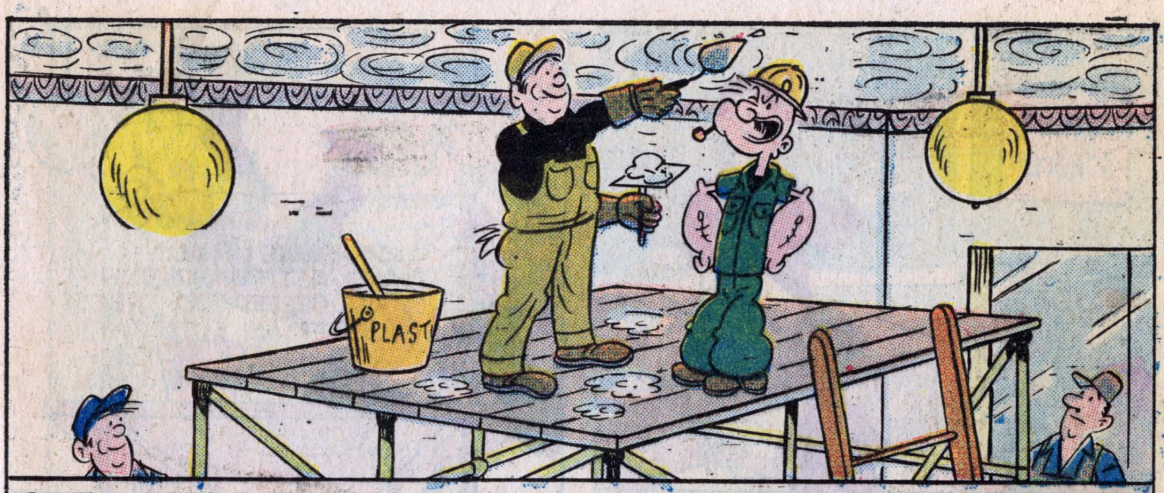

IRONWORKERS ARE USUALLY VERY STRONG. AGILITY AND GOOD BALANCE ARE NEEDED TOO. THERE'S SOME RISK OF FALLS, BUT IRON-WORKERS USE SAFETY BELTS, NETS, AND SCAFFOLDING TO REDUCE ACCIDENTS.
78 FLR.


IRON-WORKERS ARE SOMETIMES UNABLE TO WORK BECAUSE OF UNFAVORABLE WEATHER CONDITIONS. THEY USUALLY MUST BELONG TO A UNION.

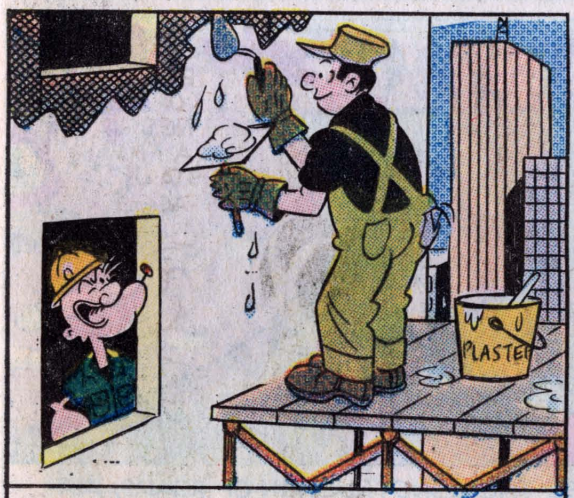
THIS MAN IS A PLASTERER. HE APPLIES PLASTER TO THE INTERIOR WALLS OF NEW BUILDINGS TO FORM A FIRE-RESISTANT SURFACE.


THE PLASTERER APPLIES THREE COATS OF PLASTER TO WALLS AND CEILINGS.

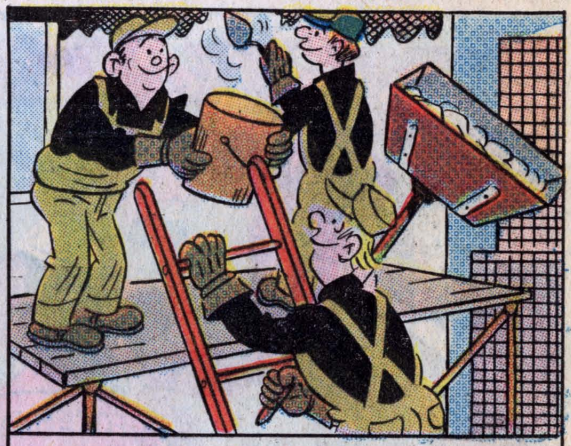
PLASTERERS MUST KNOW HOW TO SMOOTH, STIPPLE, SWIRL, AND SAND-FINISH WALLS.



SOME ARTISTIC PLASTERS CREATE FANCY DESIGNS IN WALLS AND CEILINGS. THE FINISHED PLASTER COAT MAKES THE DIFFERENCE IN THE BEAUTY OF THE BUILDING.



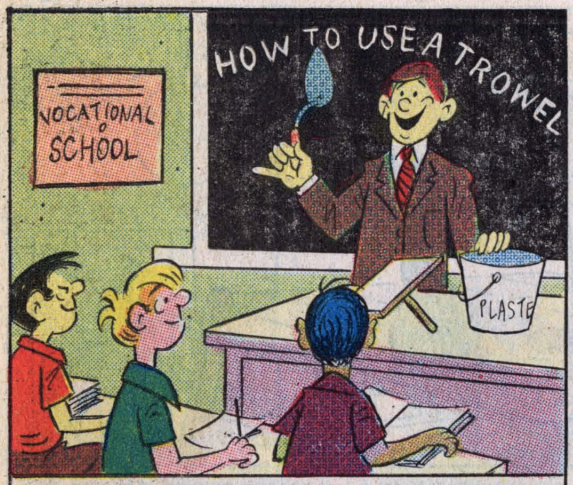
PLASTERERS SOMETIMES APPLY PLASTER TO THE OUTSIDE OF BUILDINGS.



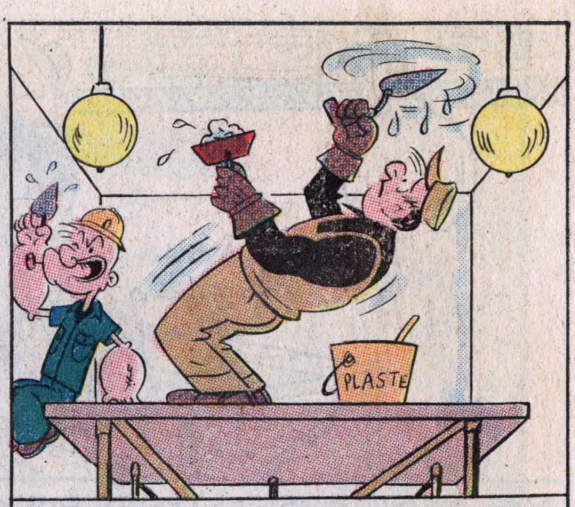
APPRENTICES WORK WITH JOURNEYMEN PLASTERERS TO LEARN THE TRADE. LABORERS MIX AND CARRY THE BASE COAT MATERIALS TO THE PLASTERER.

ABOUT 40,000 PLASTERERS WORK AT THIS TRADE. NEW LIGHT-WEIGHT PLASTERS AND IMPROVED METHODS HAVE INCREASED THE USE OF PLASTER IN SOME AREAS.

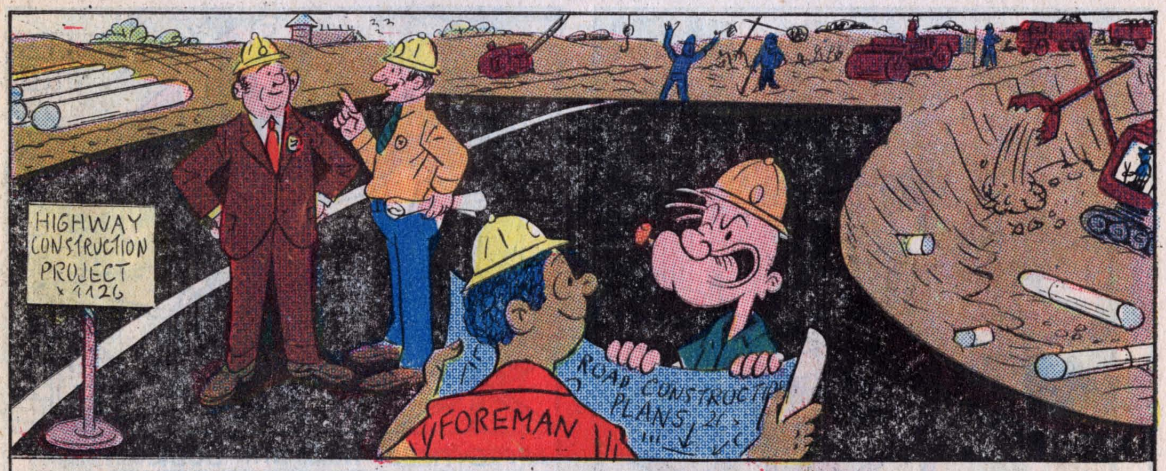
COMPLETION OF A 3- OR 4-YEAR APPRENTICESHIP IS RECOMMENDED TO LEARN PLASTERING. APPLICANTS SHOULD BE BETWEEN 17 AND 25. GOOD PHYSICAL CONDITION AND MANUAL DEXTERITY ARE IMPORTANT.



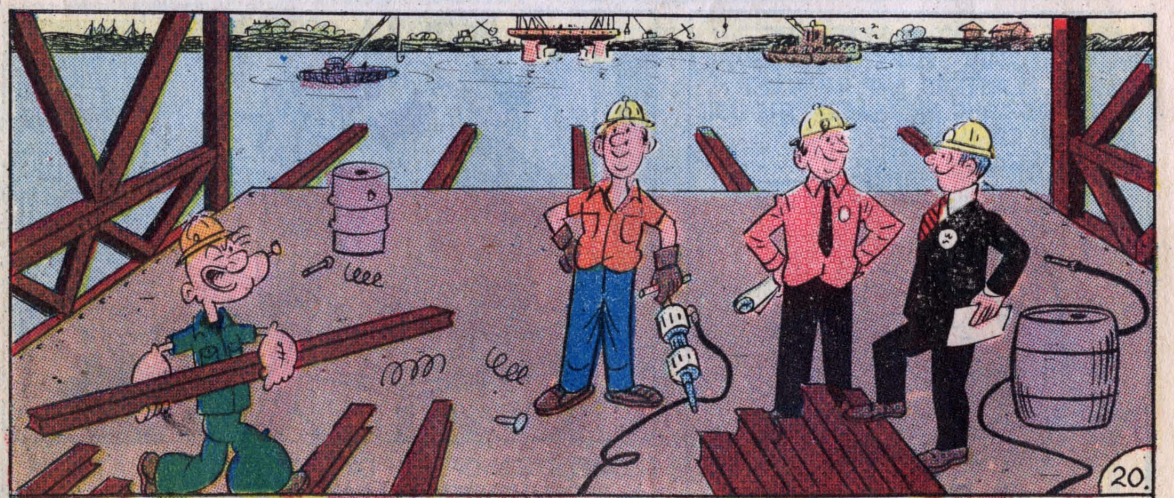
6,000 TO 8,000 HOURS OF ON-THE-JOB TRAINING PLUS 144 HOURS OF YEARLY CLASS-ROOM INSTRUCTION FOR 4 YEARS ARE RECOMMENDED.



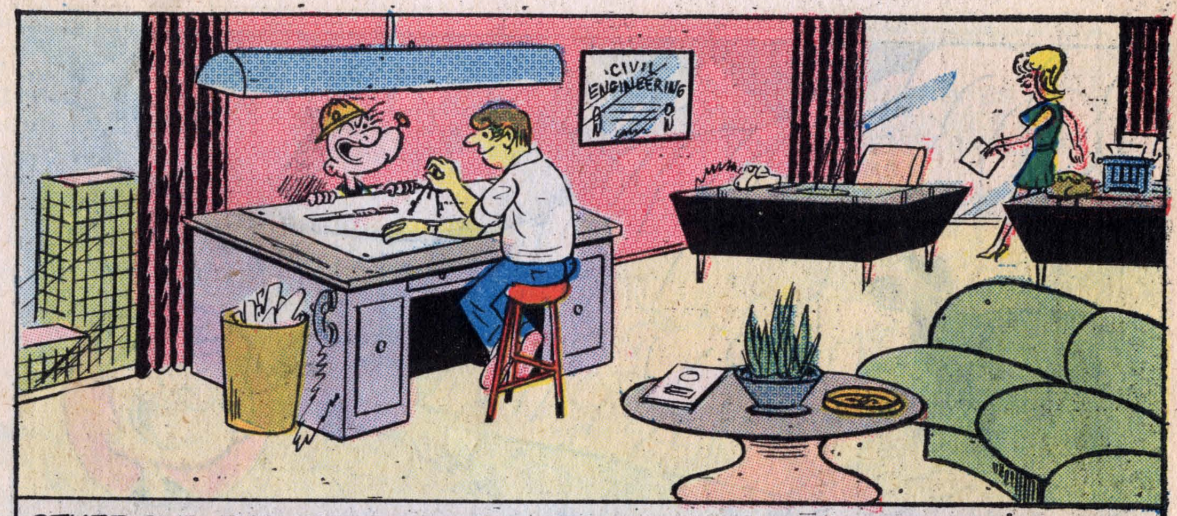
PLASTERING REQUIRES CONSIDERABLE STANDING, BENDING, AND LIFTING.



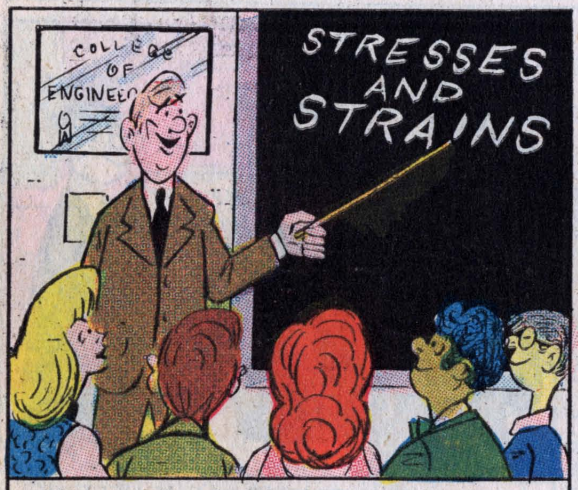
CIVIL ENGINEERS DESIGN AND SUPERVISE THE CONSTRUCTION OF ROADS, AIR-FIELDS, HARBORS, TUNNELS, BRIDGES, WATER SUPPLY AND SEWAGE SYSTEMS, AND MANY OTHER TYPES OF CONSTRUCTION.



SOME CIVIL ENGINEERS ARE IN SUPERVISORY OR ADMINISTRATIVE POSITIONS, SUCH AS SITE SUPERINTENDENT OR TOP LEVEL EXECUTIVES LIKE PRESIDENT OR MANAGER

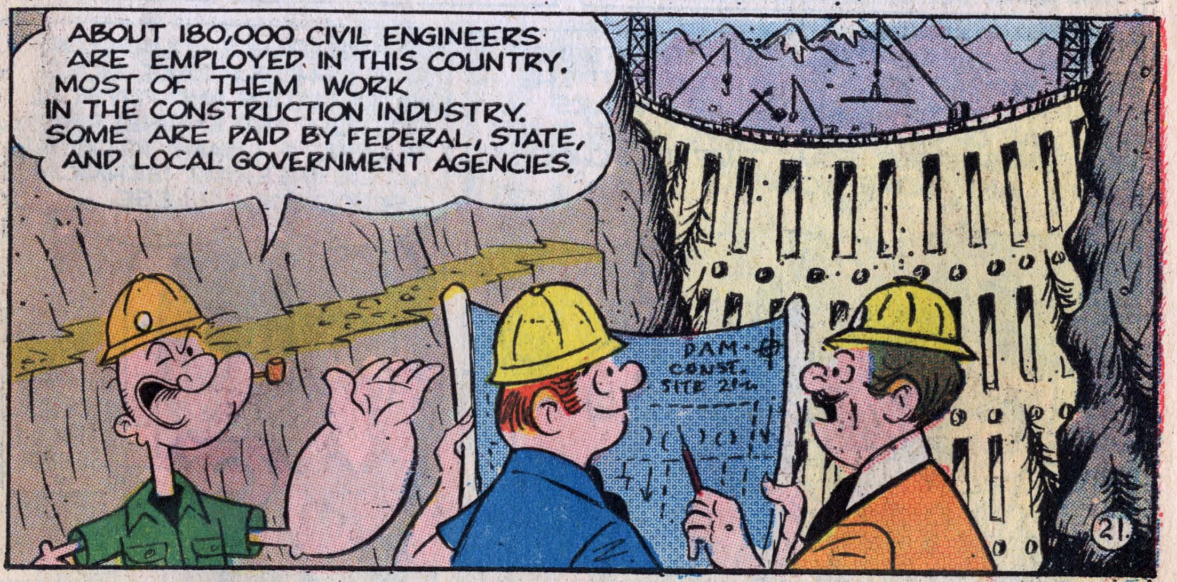


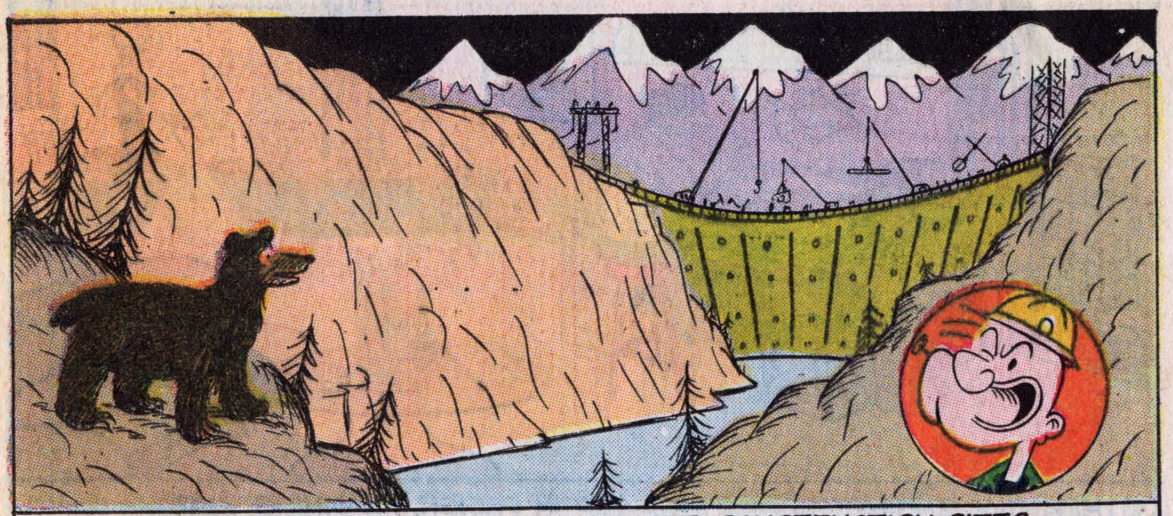
OTHER CIVIL ENGINEERS ARE ENGAGED IN DESIGN, PLANNING AND EXECUTION OF ENTIRE PROJECTS.



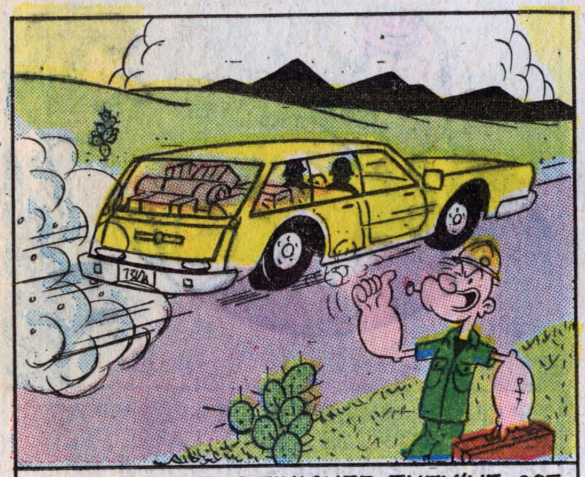
AND THERE ARE CIVIL ENGINEERS TEACHING IN COLLEGES AND UNIVERSITIES.

TOP CIVIL ENGINEERS ARE EMPLOYED AS CONSULTANTS FOR A VERY LARGE FEE. THESE ARE ENGINEERS WHO TAKE EXTREME INTEREST AND PRIDE IN THEIR WORK AND CAN COMMUNICATE WELL..

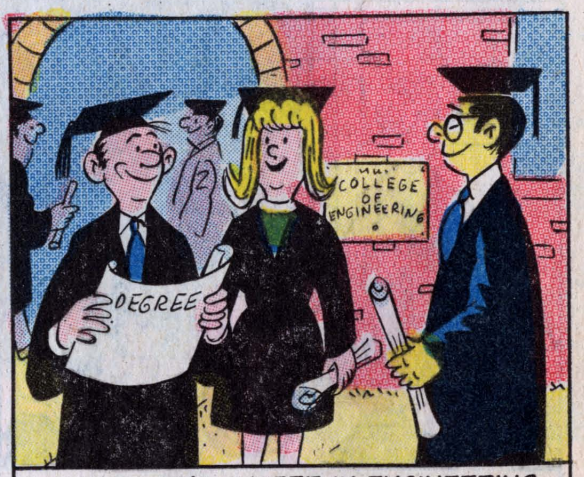

ABOUT 180,000 CIVIL ENGINEERS ARE EMPLOYED IN THIS COUNTRY. MOST OF THEM WORK IN THE CONSTRUCTION INDUSTRY. SOME ARE PAID BY FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCIES.
DAM CONST. SITE 214



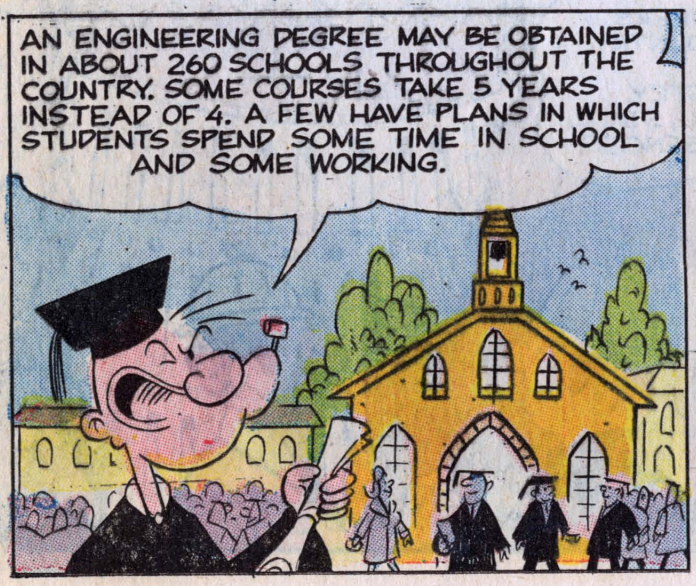
MANY OF THESE ENGINEERS WORK AT REMOTE CONSTRUCTION SITES. THEY'VE GOT TO LIVE NEAR THEIR JOBS UNTIL THEY'RE COMPLETED.

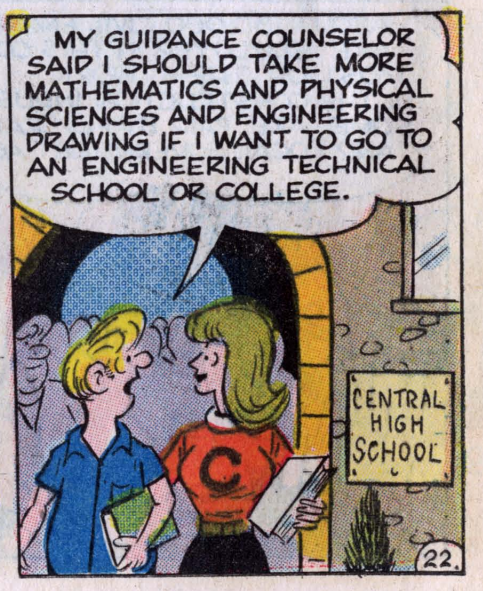


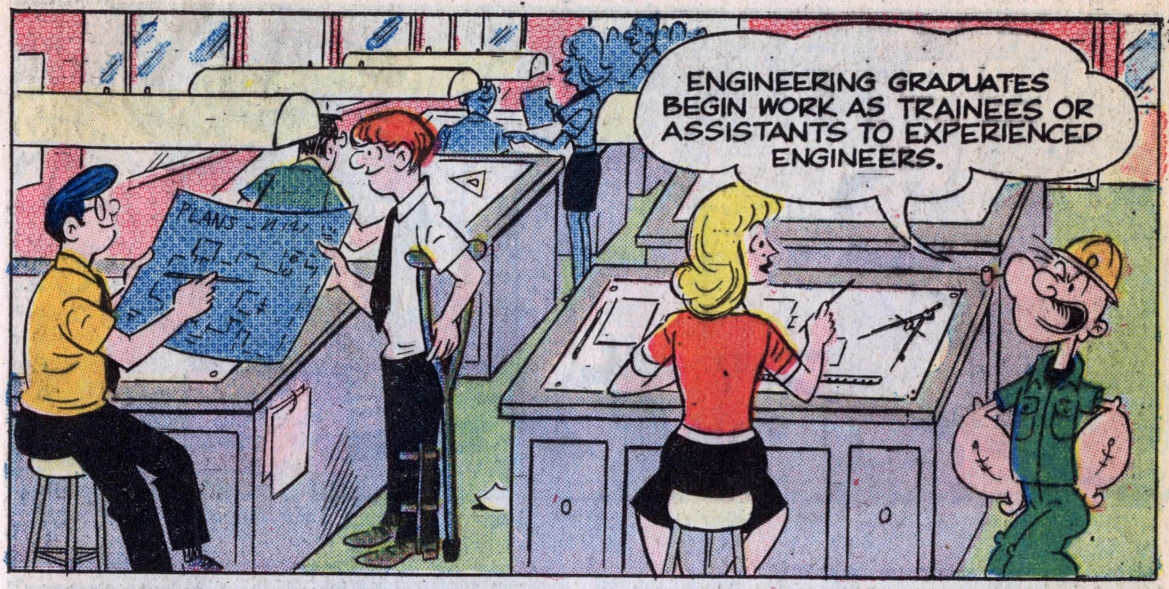
WHEN ONE JOB IS FINISHED, THEY'VE GOT TO MOVE ON TO THE NEXT ONE, PERHAPS THOUSANDS OF MILES AWAY.

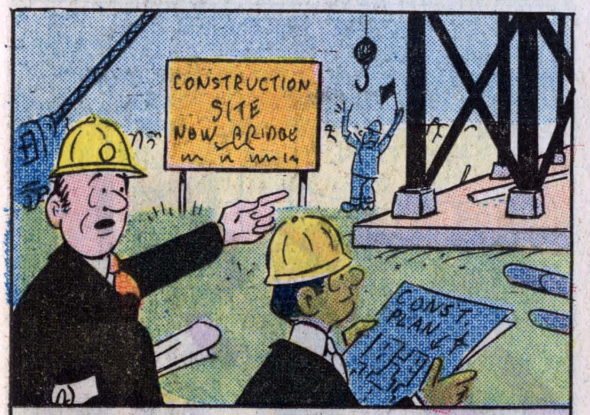


A BACHELOR'S DEGREE IN ENGINEERING IS REQUIRED FOR ENTRANCE INTO THE ENGINEERING FIELD.

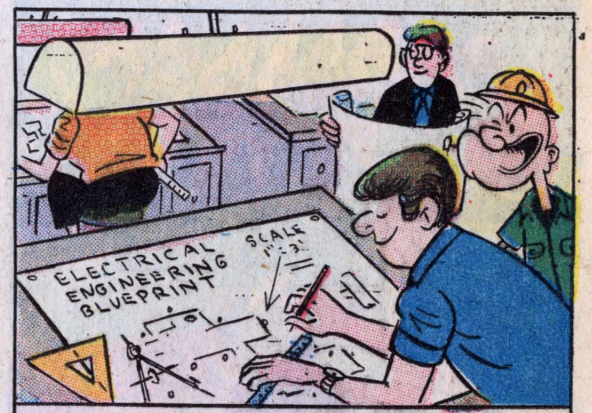

AN ENGINEERING DEGREE MAY BE OBTAINED IN ABOUT 260 SCHOOLS THROUGHOUT THE COUNTRY. SOME COURSES TAKE 5 YEARS INSTEAD OF 4. A FEW HAVE PLANS IN WHICH STUDENTS SPEND SOME TIME IN SCHOOL AND SOME WORKING.


MY GUIDANCE COUNSELOR SAID I SHOULD TAKE MORE MATHEMATICS AND PHYSICAL SCIENCES AND ENGINEERING DRAWING IF I WANT TO GO TO AN ENGINEERING TECHNICAL SCHOOL OR COLLEGE.
CENTRAL HIGH SCHOOL

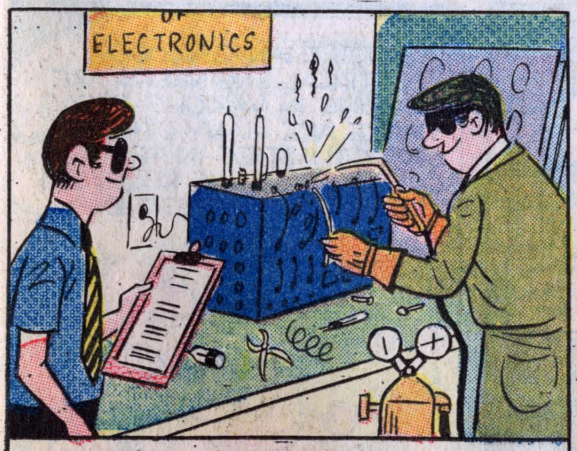




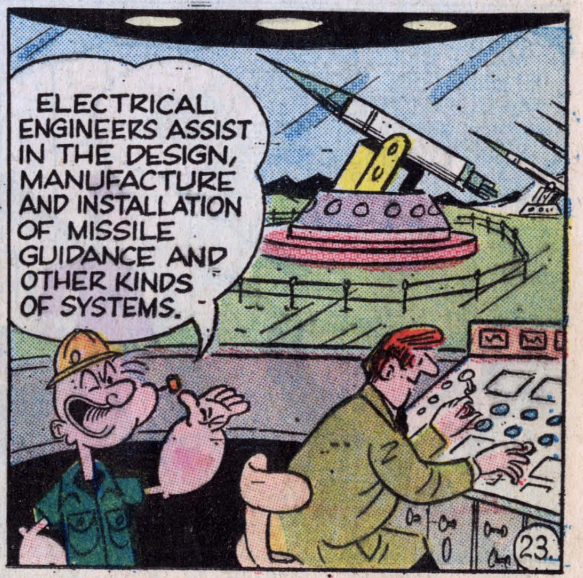
CIVIL ENGINEERING IS A RAPIDLY EXPANDING FIELD. GRADUATES, WELL TRAINED IN RECENTLY DEVELOPED ENGINEERING PRINCIPLES AND TECHNIQUES, FIND JOBS MORE QUICKLY.

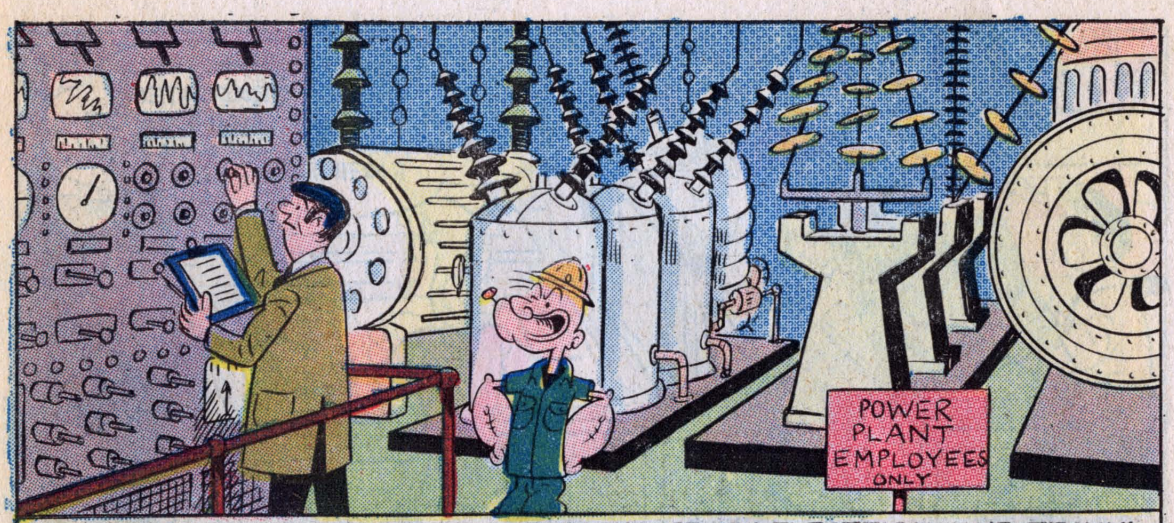


ELECTRICAL ENGINEERS WORK IN A DIFFERENT FIELD. THEY DESIGN ELECTRICAL AND ELECTRONIC EQUIPMENT. SOMETIMES THEY EMPLOY YOUNGER ASSISTANTS WITH DRAFTING ABILITY.

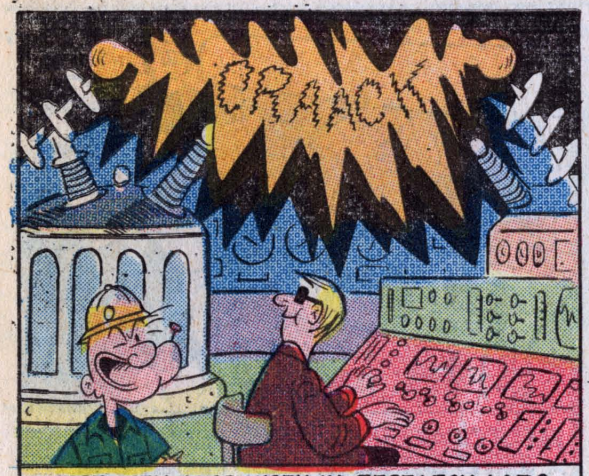


ELECTRICAL ENGINEERS ALSO SUPERVISE THE MANUFACTURE OF ELECTRICAL AND ELECTRONICS EQUIPMENT.

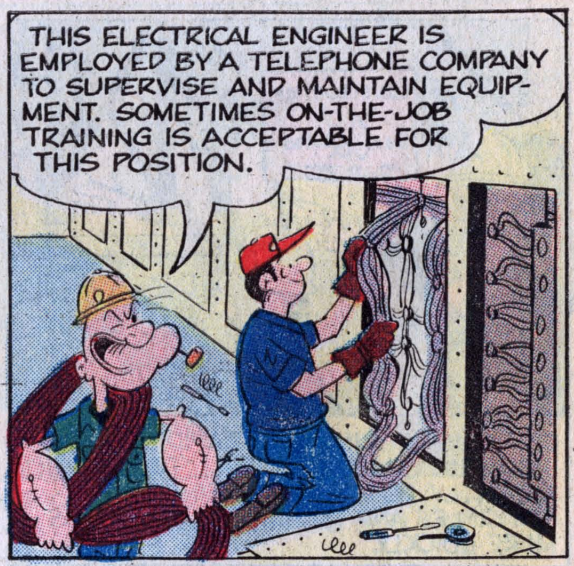

ELECTRICAL ENGINEERS ASSIST IN THE DESIGN, MANUFACTURE AND INSTALLATION OF MISSILE GUIDANCE AND OTHER KINDS OF SYSTEMS.

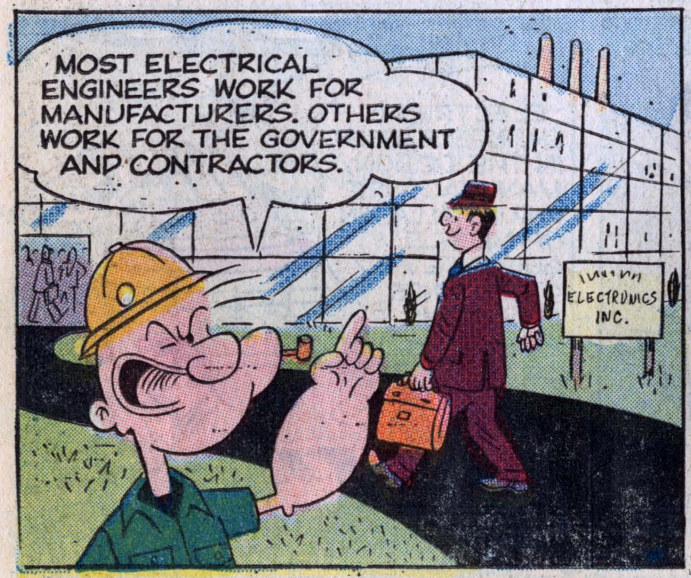


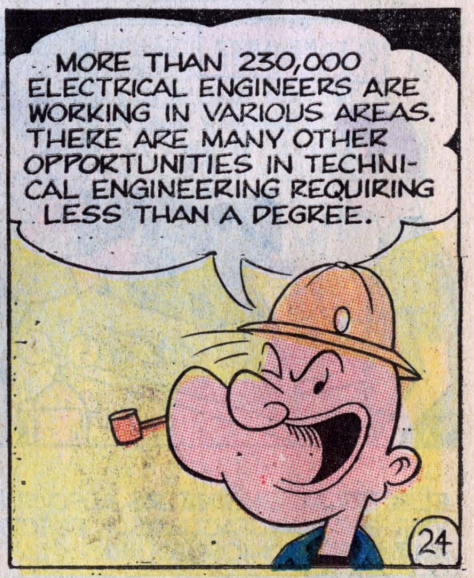
POWER PLANTS ARE DESIGNED AND OPERATED BY ELECTRICAL AND TECHNICAL ENGINEERS WHO SPECIALIZE IN THIS FIELD.

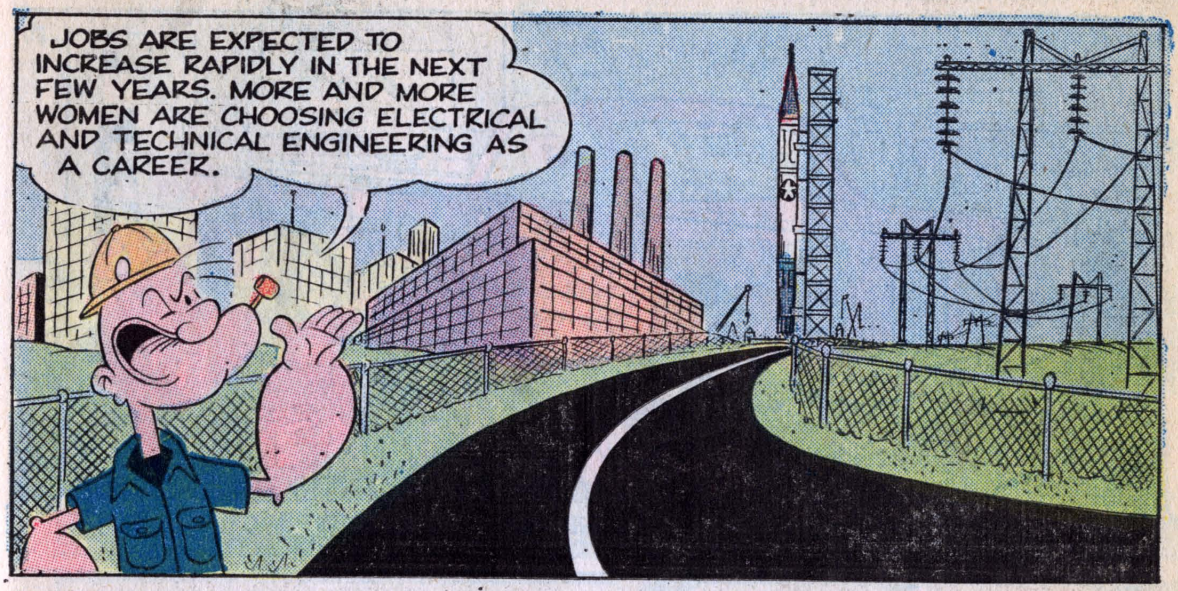


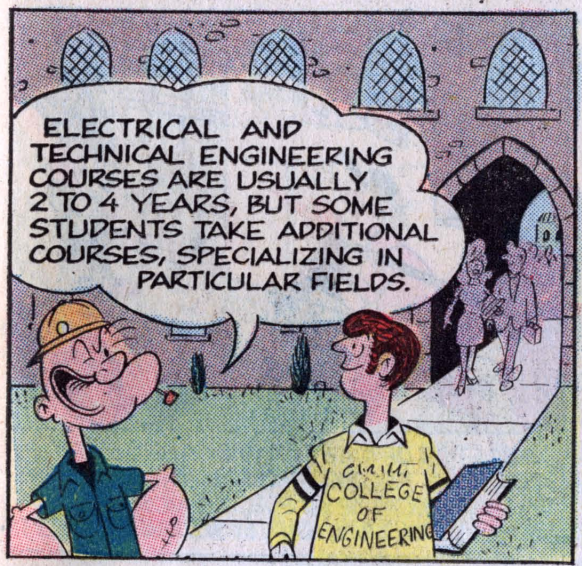
THESE MEN ALSO WORK IN RESEARCH LABORATORIES WHERE THEY DEVELOP AND TEST NEW THEORIES AND EQUIPMENT.

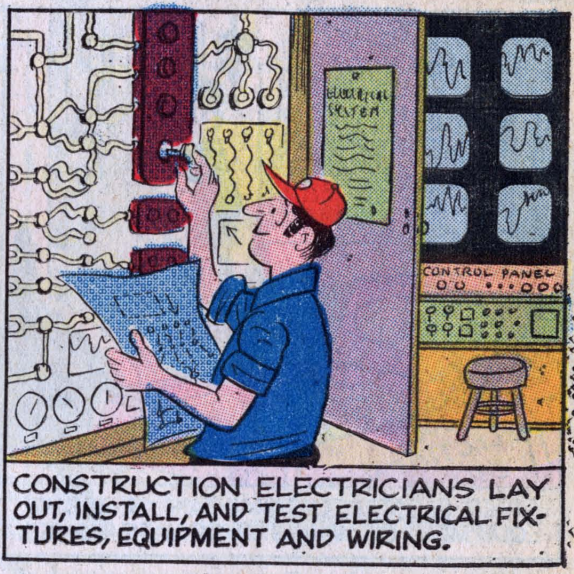

THIS ELECTRICAL ENGINEER IS EMPLOYED BY A TELEPHONE COMPANY TO SUPERVISE AND MAINTAIN EQUIPMENT. SOMETIMES ON-THE-JOB TRAINING IS ACCEPTABLE FOR THIS POSITION.



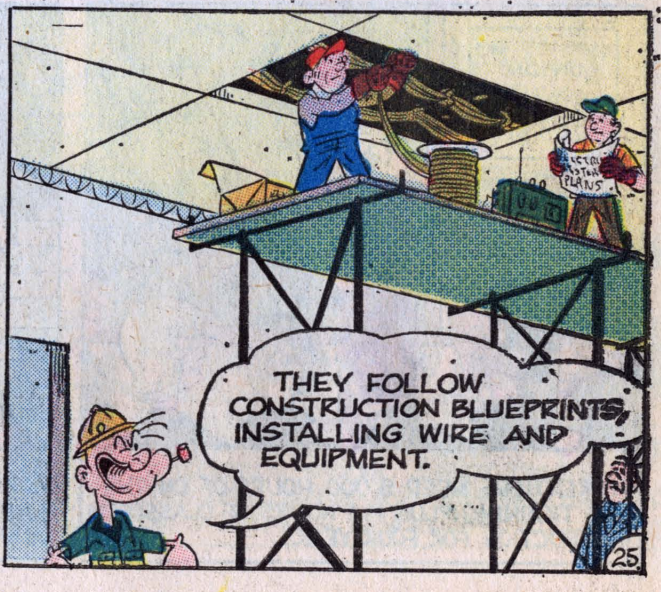

MORE THAN 230,000 ELECTRICAL ENGINEERS ARE WORKING IN VARIOUS AREAS. THERE ARE MANY OTHER OPPORTUNITIES IN TECHNICAL ENGINEERING REQUIRING LESS THAN A DEGREE.

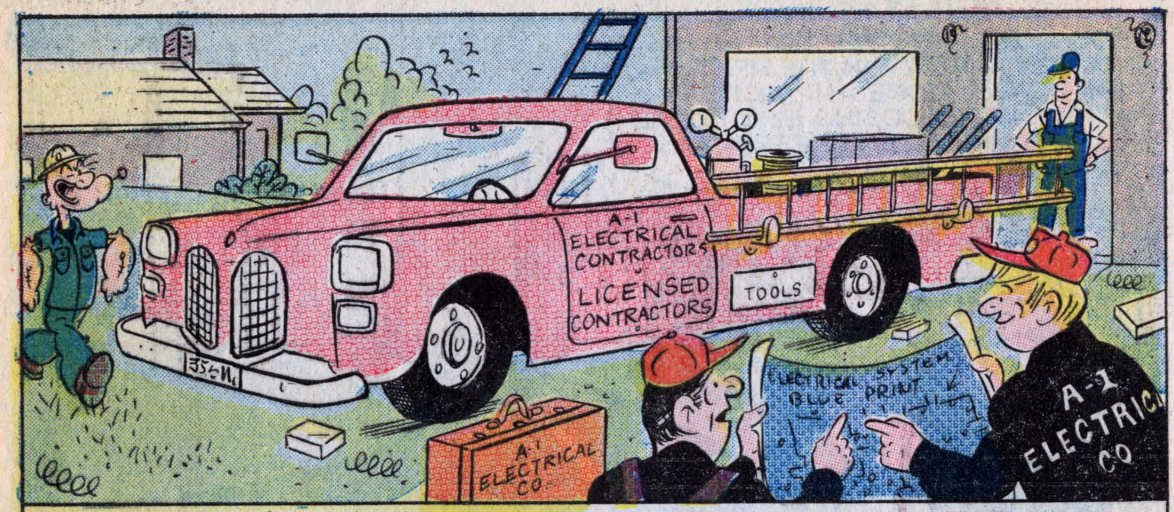

JOBS ARE EXPECTED TO INCREASE RAPIDLY IN THE NEXT FEW YEARS. MORE AND MORE WOMEN ARE CHOOSING ELECTRICAL AND TECHNICAL ENGINEERING AS A CAREER.


ELECTRICAL AND TECHNICAL ENGINEERING COURSES ARE USUALLY 2 TO 4 YEARS, BUT SOME STUDENTS TAKE ADDITIONAL COURSES, SPECIALIZING IN PARTICULAR FIELDS.
COLLEGE OF ENGINEERING

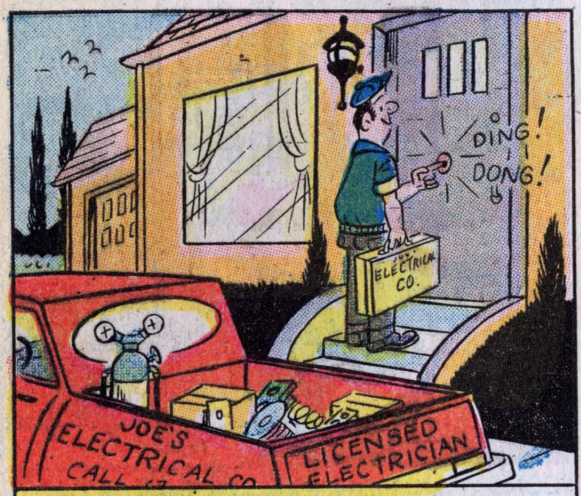

CONTROL PANEL
CONSTRUCTION ELECTRICIANS LAY OUT, INSTALL, AND TEST ELECTRICAL FIXTURES, EQUIPMENT AND WIRING.

ELECTRICIANS HAVE TO BE VERY CAREFUL WHILE THEY'RE HANDLING ELECTRICAL WIRES. ARF! ARF!
ZZZRRK

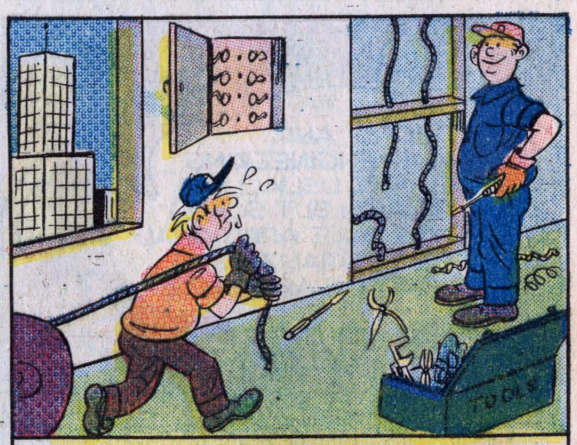

THEY FOLLOW CONSTRUCTION BLUEPRINTS, INSTALLING WIRE AND EQUIPMENT.



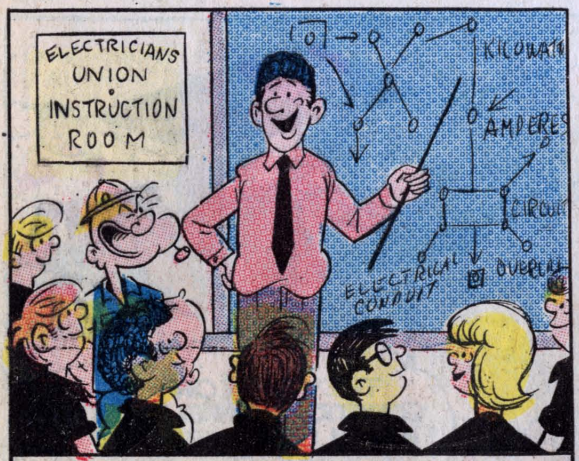
MANY ELECTRICIANS ARE SELF-EMPLOYED ELECTRICAL CONTRACTORS. SOME WORK WITH THE SAME GENERAL CONTRACTORS MOST OF THE TIME.



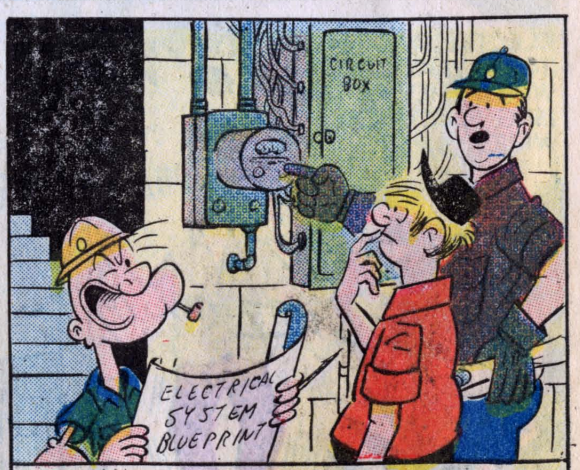
OTHER ELECTRICIANS MAINTAIN OR REPAIR EQUIPMENT OR WIRING IN PRIVATE HOMES.



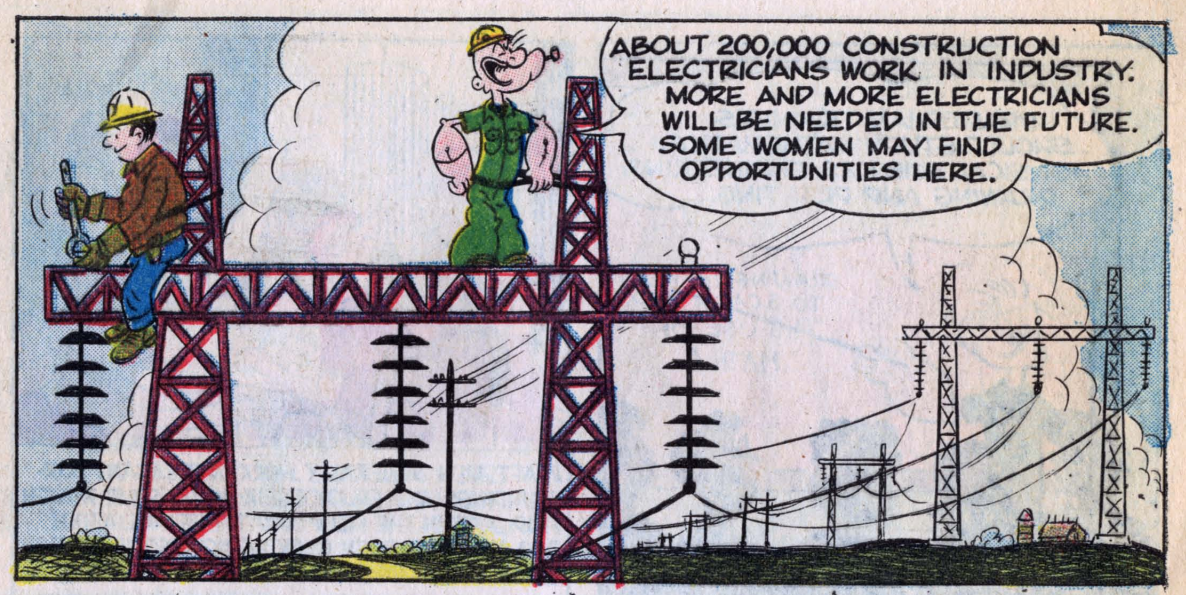
COMPLETION OF A 4-YEAR APPRENTICESHIP PROGRAM IS RECOMMENDED AS THE BEST WAY TO LEARN HOW TO BE AN ELECTRICIAN. SOME ELECTRICIANS LEARN THEIR TRADE BY WORKING AS HELPERS.

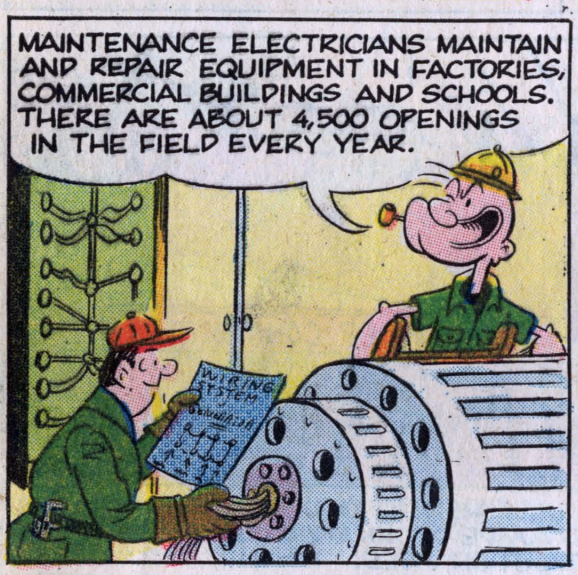


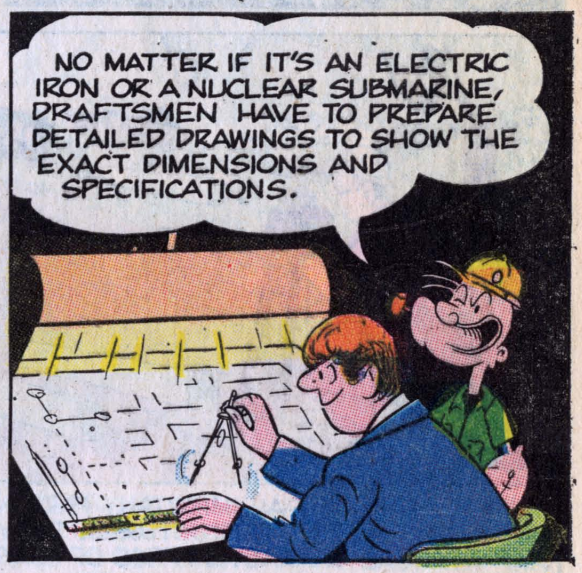
APPRENTICES NEED 8,000 HOURS OF ON-THE-JOB TRAINING PLUS 144 HOURS OF CLASSROOM INSTRUCTION FOR FOUR YEARS.

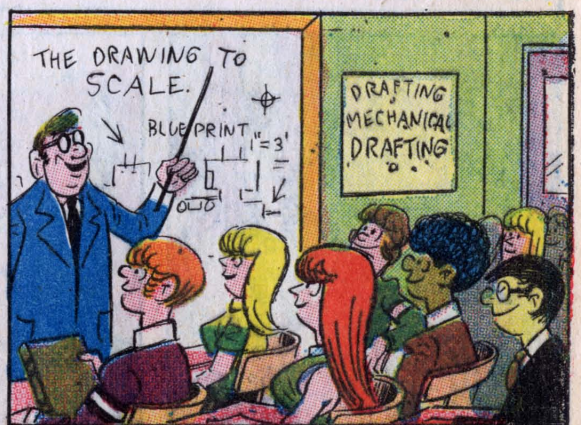


APPRENTICES ARE TAUGHT ELECTRICAL LAYOUT, BLUEPRINT READING, MATHEMATICS AND ELECTRICAL THEORY.

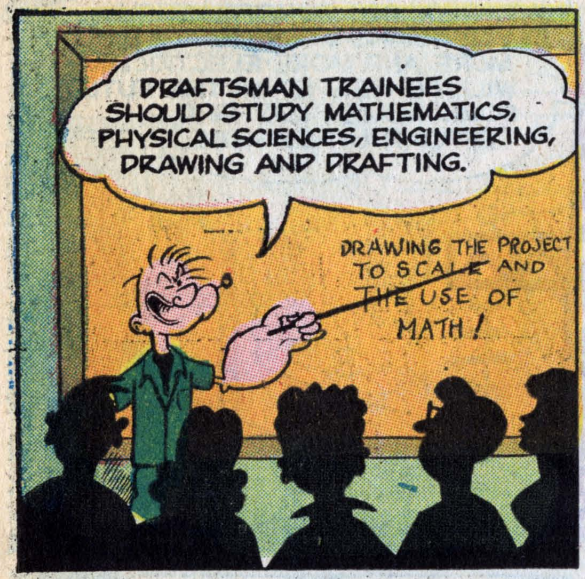

ABOUT 200,000 CONSTRUCTION ELECTRICIANS WORK IN INDUSTRY. MORE AND MORE ELECTRICIANS WILL BE NEEDED IN THE FUTURE. SOME WOMEN MAY FIND OPPORTUNITIES HERE.

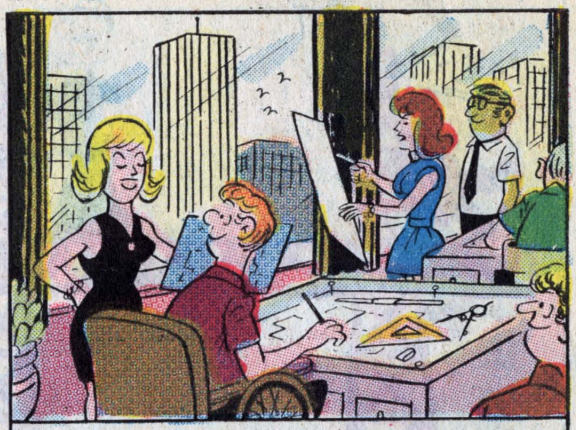

MAINTENANCE ELECTRICIANS MAINTAIN AND REPAIR EQUIPMENT IN FACTORIES, COMMERCIAL BUILDINGS AND SCHOOLS. THERE ARE ABOUT 4,500 OPENINGS IN THE FIELD EVERY YEAR.


NO MATTER IF IT'S AN ELECTRIC IRON OR A NUCLEAR SUBMARINE, DRAFTSMEN HAVE TO PREPARE DETAILED DRAWINGS TO SHOW THE EXACT DIMENSIONS AND SPECIFICATIONS.

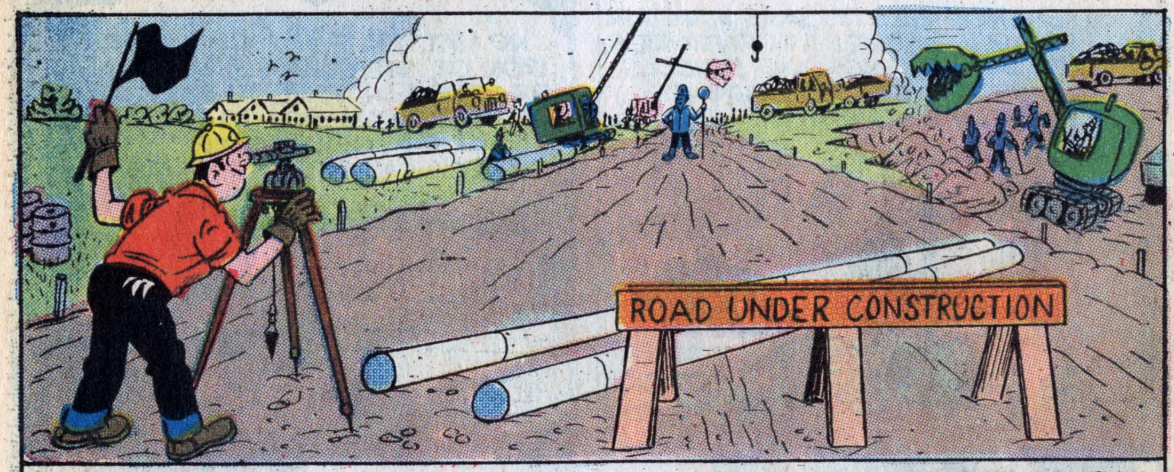


YOUNG PEOPLE INTERESTED IN A DRAFTING CAREER CAN GET THE TRAINING IN HIGH SCHOOL, A TECHNICAL SCHOOL, JUNIOR COLLEGE, OR THROUGH ON-THE-JOB TRAINING COMBINED WITH PART-TIME SCHOOLING.


DRAFTSMAN TRAINEES SHOULD STUDY MATHEMATICS, PHYSICAL SCIENCES, ENGINEERING, DRAWING AND DRAFTING.
DRAWING THE PROJECT TO SCALE AND THE USE OF MATH!

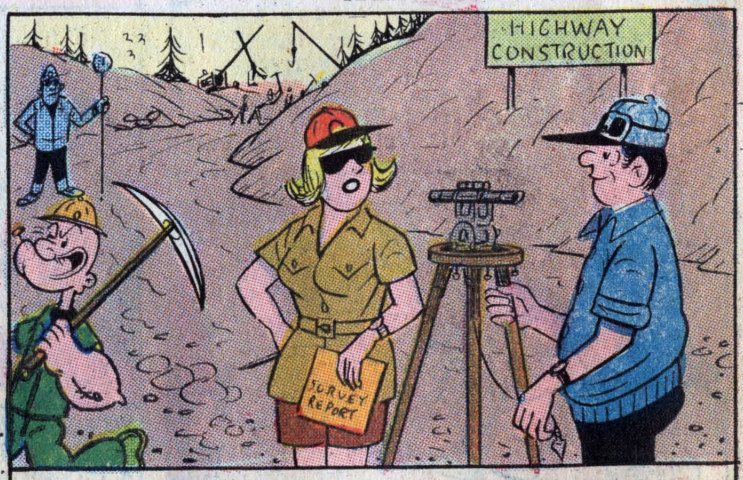


DRAFTSMEN GENERALLY WORK IN PLEASANT SURROUNDINGS AND ENJOY THEIR WORK. SOME WOMEN FIND JOBS IN THE FIELD AND THERE ARE ABOUT 300,000 DRAFTSMEN WORKING NOW. SOME DEAF OR OTHER HANDICAPPED FIND WORK IN THIS FIELD.

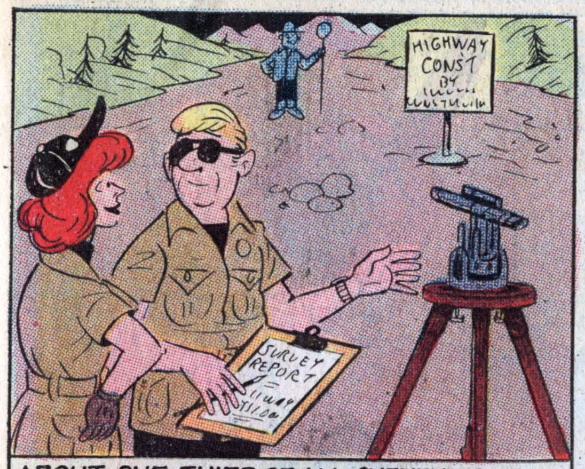


SURVEYORS PLAY AN IMPORTANT PART IN THE CONSTRUCTION OF HIGHWAYS, AIRFIELDS, BRIDGES AND OTHER STRUCTURES. THEY PROVIDE INFORMATION ON MEASUREMENTS AND PHYSICAL CHARACTERISTICS OF CONSTRUCTION SITES.

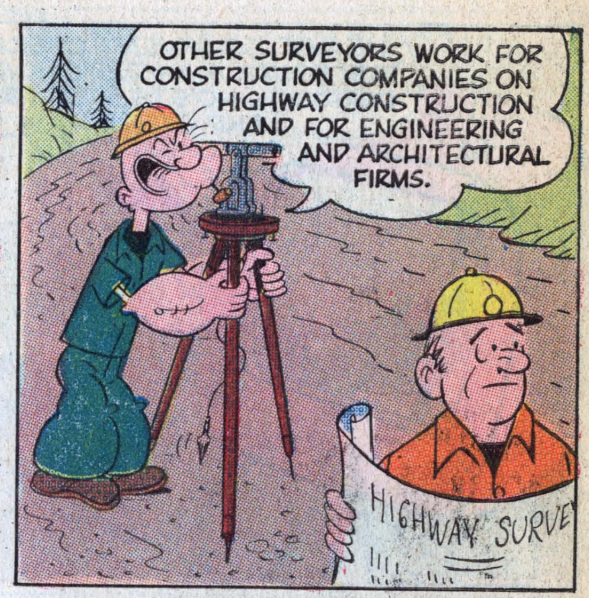
SOME SURVEYORS PERFORM LAND SURVEYS, PREPARING MAPS.

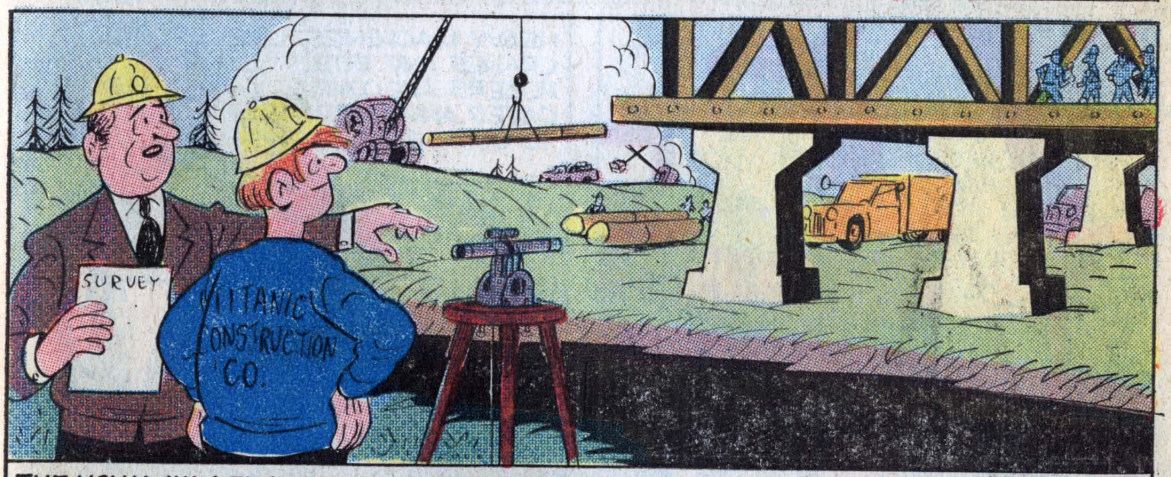


ABOUT 5 PERCENT OF THE 50,000 SURVEYORS ARE WOMEN, BUT THIS NUMBER IS INCREASING. SURVEYORS WORK IN SMALL TOWNS AS WELL AS CITIES.

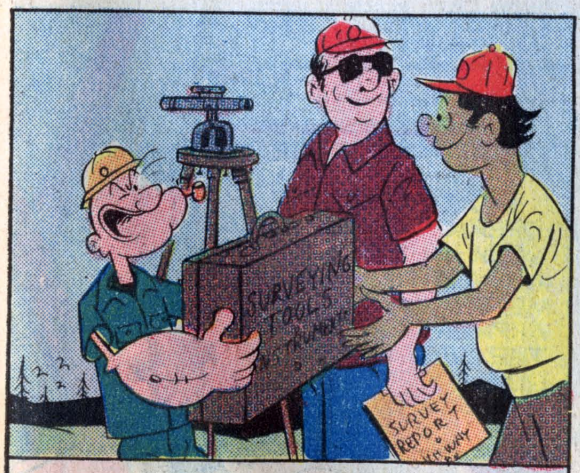


ABOUT ONE THIRD OF ALL SURVEYORS WORK FOR FEDERAL, STATE AND LOCAL GOVERNMENT. THE U.S. GEOLOGICAL SURVEY AND THE BUREAU OF LAND MANAGEMENT EMPLOY MANY.

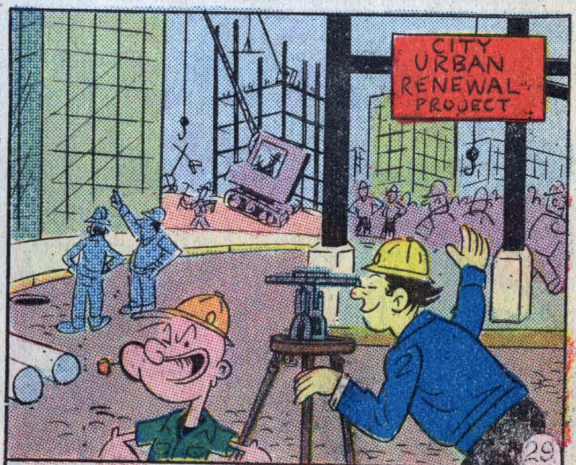

OTHER SURVEYORS WORK FOR CONSTRUCTION COMPANIES ON HIGHWAY CONSTRUCTION AND FOR ENGINEERING AND ARCHITECTURAL FIRMS.
HIGHWAY SURVE



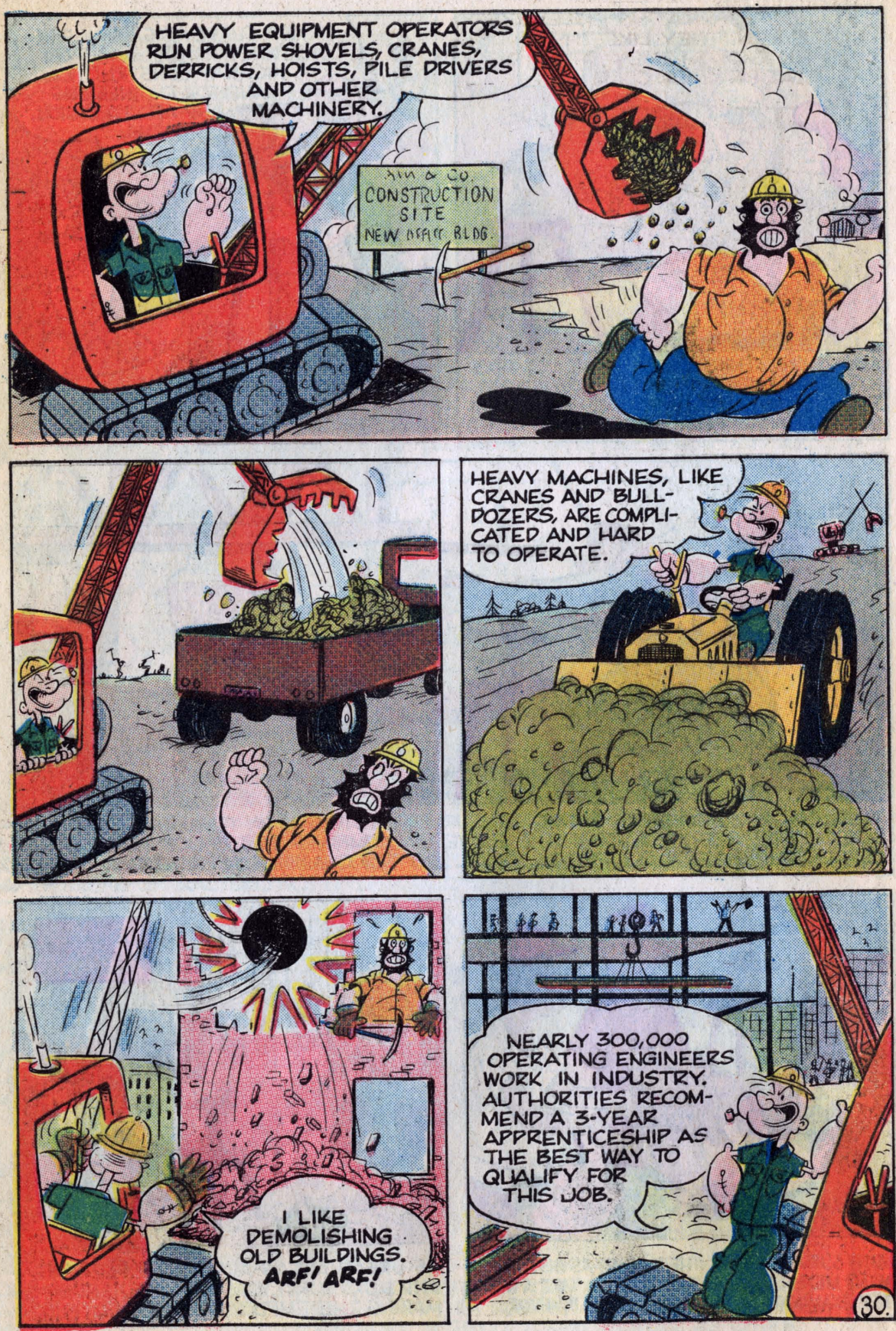
THE USUAL WAY BEGINNERS ENTER THE SURVEYING FIELD IS BY FINISHING HIGH SCHOOL, THEN GETTING A JOB WITH A SURVEYOR. COMBINED ON-THE-JOB TRAINING AND CORRESPONDENCE OR CLASSROOM TRAINING OFTEN QUALIFIES APPRENTICES.

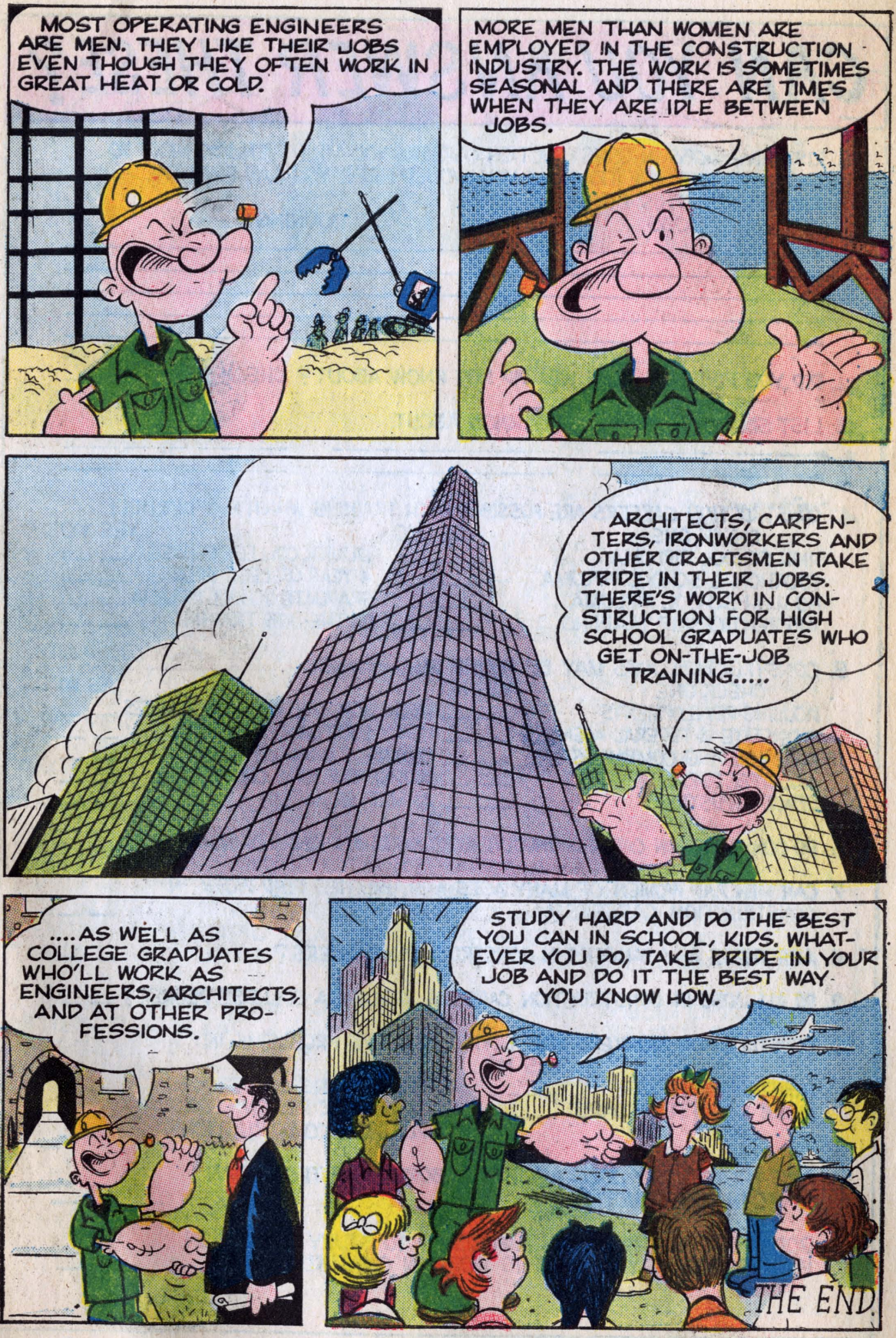


MANY SURVEYORS GET THEIR START AS INSTRUMENT MEN. SOMETIMES THEY HAVE TO TAKE A WRITTEN EXAMINATION TO QUALIFY AS SURVEYOR.



AS URBAN AREAS ARE DEVELOPED, MORE AND MORE SURVEYORS WILL BE NEEDED, MAKING THE EMPLOYMENT OUTLOOK GOOD.


HEAVY EQUIPMENT OPERATORS RUN POWER SHOVELS, CRANES, DERRICKS, HOISTS, PILE DRIVERS AND OTHER MACHINERY.
CONSTRUCTION SITE
HEAVY MACHINES, LIKE CRANES AND BULL-DOZERS, ARE COMPLI-CATED AND HARD TO OPERATE.
I LIKE DEMOLISHING OLD BUILDINGS. ARF! ARF!
NEARLY 300,000 OPERATING ENGINEERS WORK IN INDUSTRY. AUTHORITIES RECOM-MEND A 3-YEAR APPRENTICESHIP AS THE BEST WAY TO QUALIFY FOR THIS JOB.


MOST OPERATING ENGINEERS ARE MEN. THEY LIKE THEIR JOBS EVEN THOUGH THEY OFTEN WORK IN GREAT HEAT OR COLD.
MORE MEN THAN WOMEN ARE EMPLOYED IN THE CONSTRUCTION INDUSTRY. THE WORK IS SOMETIMES SEASONAL AND THERE ARE TIMES WHEN THEY ARE IDLE BETWEEN JOBS.
ARCHITECTS, CARPENTERS, IRONWORKERS AND OTHER CRAFTSMEN TAKE PRIDE IN THEIR JOBS. THERE'S WORK IN CONSTRUCTION FOR HIGH SCHOOL GRADUATES WHO GET ON-THE-JOB TRAINING.....
....AS WELL AS COLLEGE GRADUATES WHO'LL WORK AS ENGINEERS, ARCHITECTS, AND AT OTHER PROFESSIONS.
STUDY HARD AND DO THE BEST YOU CAN IN SCHOOL, KIDS. WHATEVER YOU DO, TAKE PRIDE IN YOUR JOB AND DO IT THE BEST WAY YOU KNOW HOW.
THE END

CAN YOU ANSWER THESE?

1. LIST FIVE JOBS IN CONSTRUCTION CAREERS YOU MIGHT ENJOY. NEXT TO EACH JOB, LIST THE TRAINING YOU WOULD NEED. YOU CAN FIND THE ANSWERS IN THIS BOOK.

JOBS	TRAINING

2. DID YOU FIND ANY JOBS YOU DID NOT KNOW ABOUT? CHECK ONE. YES ___ NO ___

3. LIST SIX JOBS YOU DID NOT KNOW ABOUT.

4. CONSTRUCTION CAREERS ARE POSSIBLE WITH TRAINING WHICH MAY INCLUDE:

CHECK ONE	YES	NO		YES	NO
HIGH SCHOOL DIPLOMA	___	___	JUNIOR COLLEGE DEGREE	___	___
VOCATIONAL SCHOOL DIPLOMA	___	___	4-YEAR COLLEGE DEGREE	___	___
NO HIGH SCHOOL DIPLOMA	___	___	GRADUATE SCHOOL DIPLOMA	___	___
APPRENTICESHIP TRAINING	___	___	ON-THE-JOB TRAINING	___	___

5. CONSTRUCTION JOBS MAY BE FOUND IN:

CHECK ONE	YES	NO		YES	NO
HOUSING DEVELOPMENTS	___	___	MECHANICAL CONTRACTING COMPANIES	___	___
CITY, STATE & FEDERAL AGENCIES	___	___	HEAVY EQUIPMENT COMPANIES	___	___
ROAD BUILDING COMPANIES	___	___	BUSINESS & INDUSTRY	___	___
ARCHITECTURAL OFFICES	___	___	BRIDGE BUILDING COMPANIES	___	___
SPACE INDUSTRIES	___	___	ARMED SERVICES	___	___

6. DO CONSTRUCTION CAREERS INVOLVE WORKING IN ALL KINDS OF WEATHER? ___ ___

7. CAN MEN AND WOMEN OF MANY AGES AND ABILITIES FIND WORK IN CONSTRUCTION CAREERS? ___ ___

8. ARE THERE ANY DANGERS IN CONSTRUCTION CAREERS? ___ ___

9. DO ALL JOBS IN CONSTRUCTION CAREERS REQUIRE A COLLEGE DEGREE? ___ ___

10. CONSTRUCTION WORKERS ARE TRYING TO SOLVE PROBLEMS IN:

	YES	NO			
HOUSING FACILITIES	___	___	BETTER WORKING CONDITIONS	___	___
MORE & BETTER ROADS	___	___	NEW & BETTER DESIGNS FOR INDUSTRIAL CONSTRUCTION	___	___

11. ARE THERE MANY JOBS AT THE LABORER AND TECHNICIAN LEVEL IN CONSTRUCTION? ___ ___

12. DOES POPEYE THINK IT IS IMPORTANT TO STUDY AND FINISH HIGH SCHOOL IF YOU WANT TO WORK IN CONSTRUCTION? ___ ___

HEY, KIDS-

IF YOU ARE INTERESTED IN A JOB OR CAREER IN CONSTRUCTION, MANY INTERESTING, SATISFYING AND REWARDING JOBS ARE AVAILABLE TO ANYONE WHO WANTS TO WORK IF THEY ARE OLD ENOUGH AND ABLE TO QUALIFY.

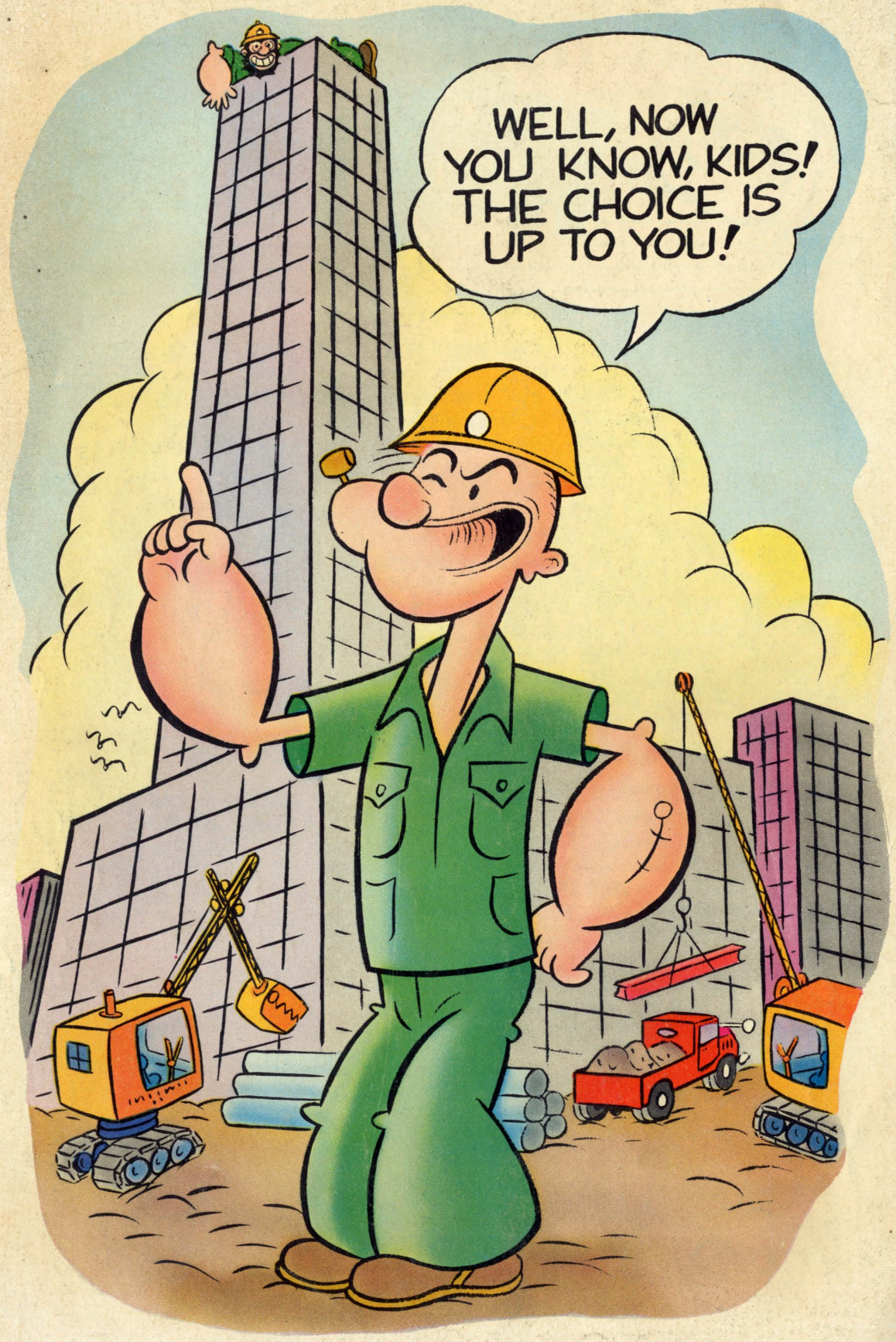
WHETHER YOU WOULD BE A BRICKLAYER OR AN ARCHITECT, YOUR JOB WOULD GIVE YOU THE PERSONAL DIGNITY AND PRIDE THERE IS IN ALL HONEST WORK, FINANCIAL REWARD, SATISFACTION IN A JOB WELL DONE AND IN CONTRIBUTING TO THE GROWTH OF OUR WORLD. BRICKLAYERS, FOR EXAMPLE, MAY NOT HAVE THE EDUCATION AND TRAINING OF ARCHITECTS, BUT THE BUILDINGS ARCHITECTS DESIGN CANNOT BE BUILT WITHOUT BRICKS AND BRICKLAYERS, IN MANY CASES. HOWEVER, IF YOU DESIRE, YOU CAN ALSO DEVELOP, WITH THE RIGHT ADDITIONAL EDUCATION AND TRAINING, INTO AN ARCHITECT, EVEN IF YOU HAVE STARTED AS A BRICKLAYER.

DESIGNING AND BUILDING FACTORIES, OFFICE BUILDINGS, HOMES, STORES, BRIDGES AND OTHER FACILITIES TO GIVE PEOPLE SAFE, COMFORTABLE, RELIABLE AND ATTRACTIVE SHELTER AND SERVICE IS WHAT **CONSTRUCTION** CAREERS ARE ALL ABOUT. WHETHER OR NOT YOU HAVE A PHYSICAL OR MENTAL HANDICAP OR CAN EVEN SPEAK ENGLISH PROPERLY, THERE ARE WORTHWHILE CAREERS IN CONSTRUCTION FOR YOU.

IF YOU WOULD LIKE TO KNOW MORE ABOUT THESE OPPORTUNITIES, SEE YOUR CAREER OR VOCATIONAL GUIDANCE DIRECTOR AT SCHOOL, OR ELSE LET THEM HELP YOU GET TO TALK WITH PEOPLE WHO ARE WORKING IN THE **CONSTRUCTION** CAREER OR JOB OF MOST INTEREST TO YOU.

Your Pal,

Popeye


WELL, NOW YOU KNOW, KIDS! THE CHOICE IS UP TO YOU!